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THE EIGHTEENTH AMENDMENT

AND THE PART PLAYED BY ORGANIZED MEDICINE

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**THE
EIGHTEENTH AMENDMENT**

AND THE PART PLAYED BY ORGANIZED MEDICINE

by

CHARLES TABER STOUT ✓



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PREFACE

The first pages of this book were included in a paper written as a protest against the candidacy of a regular Army officer who was seeking the nomination of one of the great parties for the office of President of the United States. This general officer had entered the Army through the medical branch of the service and still maintained his membership in the medical organization, which expected to avail itself of his Administration (if that ever became a reality) to push its special legislative programme. Ten days after the protest referred to reached its destination, together with the protests of others, an inquiry as to the source of the candidate's campaign fund was begun in the Senate. That investigation ended his presidential aspirations.

With this inception, the book has been continued and completed in order to draw public attention to a question of national concern—the real meaning of the prohibition movement, and its relations to Organized Medicine and other interests. Under the guise of altruism, a grave injustice has been imposed upon a free people by a relatively small number of zealots and profiteers. It seems important, therefore, that the public should know the facts.

C. T. S.

INTRODUCTION

Like many others, I used to look upon prohibition as a dream of the idealist. It was a dream with which I was not particularly concerned. My ideas on the whole subject were rather vague, like the ideas of most people on most subjects of importance; but I believed in a general way that the removal of intoxicating liquors from ordinary use would be a good thing for the country. The harm which alcohol had done and was doing was quite obvious. Like others, I had seen lives ruined by over-indulgence and homes broken up. I had drawn what seemed natural conclusions from casual observation and reflection. But when I began to give the question serious consideration, I had to admit that I really *knew* nothing about prohibition, good or bad. I had certain impressions, which might be justifiable or otherwise. That was all; and it was not enough.

I began to read some of the literature on the subject. One of the first books which came to my attention was Dr. Eugene Lyman Fisk's "Alcohol—Its Relation to Human Efficiency and Longevity." Many of his statements conflicted with the opinions

I had formed in the loose way just described. The book, however, was persuasive, and I read it through a second time. After this second perusal I became skeptical; and I then read it once more, critically, checking up the various statements, with the result that I had to discard many of them as worthless. I do not mean to question Dr. Fisk's sincerity, of course; but apparently, as in the case of so many of our scientists, his field of observation has been distinctly limited. The impression which I received from the book was that if the prohibitionists were obliged to resort to propaganda such as this, there must be something wrong with their cause.

I went over the matter with others. They became interested, and we traced some of the propaganda down to its sources. What had been at first merely curious inquiry soon developed into an absorbing study, not only of the theories of the prohibitionists, but also of the forces behind the movement. The moral plea on which prohibition was originally put forward had now been subordinated to the question of health. The American Medical Association had joined the ranks of the anti-alcoholists and had passed a resolution condemning alcohol both as a food and a medicine. We followed the activities of the association through its various channels of influence. The trail led from one of the great medical institutions to another, until it finally brought up

in the medical departments of the national government.

The aged fisherman of the Arabian Nights could not have been more astonished when he removed the seal of Solomon from the mouth of the jar which his net had brought to the surface, and saw the genie issue forth, than we were at the result of our investigations. We found a giant organization occupying the centre of the stage. Torn by factions within, pressed on all sides by virile foes without, it was turning and twisting, grasping at any weapon which would preserve its life for even a short time longer. It was medievalism struggling against the advance of civilization. We found, indeed, more than the power behind prohibition itself; we found the reason why disease has been able to flourish in spite of all that science has accomplished for its control. We found men of international reputation in the world of medicine prostituting their profession, and forgetting their personal honor, to maintain an organization which has long outlived its usefulness and which has no place in a civilized community in a modern age.

There is but one excuse for prohibition, and that is ignorance. Is the ignorance displayed by our medical authorities on the subject of alcohol real or assumed? Do they sincerely believe, or merely pretend to believe, that prohibition will mean an

improvement in the health of the people? The question is on a par with another one which has been asked rather frequently: Did the Inquisitors of the Middle Ages believe that the rack and the fagot would advance the cause of truth, or did a certain proportion of them, at least, employ these unpleasant arguments mainly to further their own interests and protect their special organization?

Some light on the first question, at any rate, should be found in the ensuing pages.

CONTENTS

CHAPTER	PAGE
INTRODUCTION	vii
I THE ISSUE	9
II THE MORAL PLEA FAILS	13
III THE HEALTH PLEA	17
IV ORGANIZED MEDICINE	22
V THE SERUM CONTROVERSY	30
VI A NEW FACTOR	35
VII THE SIGNIFICANCE OF CHEMOTHERAPY	41
VIII A PROFITABLE PARTNERSHIP	46
IX THE OTHER PARTNERS	50
X SOME PROHIBITION PROPAGANDA	59
XI ALCOHOL AND LONGEVITY	69
XII MORE FALLACIOUS PROPAGANDA	75
XIII THE LABORATORY vs. NATURE	84
XIV THE FOOD VALUE OF ALCOHOL	97
XV ALCOHOL AS A MEDICINE	104
XVI ALCOHOL AND FATIGUE	113
XVII FATIGUE AND DISEASE	123
XVIII THE ECONOMIC SIDE OF PROHIBITION	130
XIX THE LAW AND PERSONAL LIBERTY	149
XX THE LABOR UNION	159
XXI ENFORCEMENT	167
XXII GOVERNMENT BY PROPAGANDA?	187
XXIII THE WAY OUT	192
XXIV CONCLUSION	206
INDEX	213

THE EIGHTEENTH AMENDMENT

AND THE PART PLAYED BY ORGANIZED MEDICINE

For John the Baptist came neither eating bread nor drinking wine; and ye say, He hath a devil.

The Son of Man is come eating and drinking; and ye say, Behold a gluttonous man, and a winebibber, a friend of publicans and sinners.

ST. LUKE, VII: 33, 34.

THE EIGHTEENTH AMENDMENT

CHAPTER I

THE ISSUE

America has embarked upon a great experiment, the elimination of alcoholic beverages from her national diet. The fact that wine has had its recognized place in the human economy from time immemorial seemed a matter of small consequence to the theorists who championed the prohibition movement. There were certain manifest evils connected with alcohol, therefore alcohol must go. And alcohol has gone, to a large extent. True, it still lingers in the homes of the rich and the provident; poisonous substitutes are being purveyed at fantastic prices by bootleggers, saloon keepers and other profiteers; and the home-brewer is warming to his work and gradually learning the secrets of success. But the old order has certainly changed, yielding place to new. Is the new, however, better than the old, or is it fundamentally vicious?

10 *THE EIGHTEENTH AMENDMENT*

Whenever we interfere with natural laws or established custom, trouble is to be expected; and whether expected or not, it will come. It is safer to build our houses, and even our ultra-modern skyscrapers, from the foundation upward rather than from the skyline downward; or the downward will be very clearly accentuated. But in these days of unrest, "try anything once" seems to have become the maxim of the advanced thinkers who would guide mankind to the great visionary higher level.

There has never been a time in the history of the world when the theorist was more in evidence. The wonderful progress seen everywhere in the arts and sciences during the present generation has encouraged theoretical speculation. The hypotheses of yesterday are the inventions and discoveries of to-day, by which the earth, the sea, the air have been brought under man's dominion. Success has bred a carelessness, even a contempt, for nature's laws, until we now find those who are willing to believe that the very laws of life itself can be disregarded. At the risk of platitude, it is just as well to state a simple truism: It is not by ignoring natural laws that man has triumphed, but by understanding them; not by denying, but by observing them.

The shallow theorist, the bigot or the misguided moralist may become a source of serious danger to a community. There is no more perilous element

in society than the fanatics who really believe in their fallacies, unless it be those who are willing to exploit their false doctrines for profit. "Uplift" is being used more and more frequently to disguise personal interest. It is time that people should begin to think for themselves, for they are being exploited in a way which has become a menace to popular government. With the spread of education, or rather the ability to read and write, the dissemination of false doctrines has become increasingly easy. The prohibition movement offers one of the most conspicuous examples.

The fate of the Eighteenth Amendment in the Supreme Court cannot be allowed to end the controversy. There is more than a legal principle involved: there is the vital question whether a nation can defy the laws of nature and still maintain its economic position. And with this there are the connected issues, the health, happiness and freedom of action of the American people.

It must be remembered that the Supreme Court can only pass upon a case as presented. Unfortunately the real issue, the interest of the public in (and so intimately depending upon) the question, has never had a hearing. It has been a characteristic feature of the prohibition propaganda to present the controversy in a misleading aspect, and to make it appear a conflict between temperance on

12 *THE EIGHTEENTH AMENDMENT*

the one side and the liquor interests on the other. A careful consideration of the subject from the economic standpoint is not desired. Any attempt to turn on the light has been met by the Anti-Saloon League—the stalking horse of the real interests behind the movement—by raising the bugaboo of the liquor trade. The liquor traffic as it once was, and the true and continuing relation of alcohol to the human system, are two very different things.

The public's interest in the case can be simply stated, and it is doubtful whether any court—except the final court of appeal of the whole people—has the power, or is competent, to pass on the question: Is alcohol necessary either as a food or a medicine for our individual or national well-being?

CHAPTER II

THE MORAL PLEA FAILS

There are two aspects from which prohibition may be considered: the physical side, its effect on the health of the nation, or as Dr. Fisk phrases it, "its relation to human efficiency and longevity"; and the ethical side, its influence on national morals. After all, our morals are in a way but a higher sanitary code, for we have been put on this earth presumably to do appropriate work—God's work, in no canting sense—and moral guidance is to the end that we shall be fit in mind and body to carry on this work and assist our neighbors in the performance of their share, to the mutual welfare of all.

The morals, as commonly understood, of the Western nations are rooted in the law of Moses and the teachings of Christ. The miracles, sacraments and revelations of the Christian and Jewish religions alike are opposed to prohibition. It is difficult to see how any moral ground can be asserted for this fetich unless we are ready to discard the clear guidance of both the Old and New Testaments. Nothing could be plainer than Christ's acceptance of wine in the institution of the Blessed

14 *THE EIGHTEENTH AMENDMENT*

Sacrament, the miracle at Cana of Galilee, and his teaching in the city called Nain. The Christian religion preaches temperance, not prohibition. There is no Christian virtue, nor any other kind of virtue, in a self-denial that is enforced by a prison cell or moral straitjacket. If the Church had had the disposal of the immense sum by which prohibition was purchased, were there not vital purposes in accordance (not at variance) with Christ's teaching, for which the money could have been well spent? Is total abstinence so paramount that the Church is willing to subordinate everything else for this one aim,—or are we now practising evangelism intensively, virtue by virtue?

The law of Moses is accepted by both the Christian and the Jew as essentially the revelation of God. It has an important bearing on the subject not only morally, but physically also. There may be some who doubt the divine origin of the Hebrew laws, but they cannot question the historical fact that under these laws the people rose from a condition of slavery to the glory of a great nation under Solomon.

For four hundred and thirty years the Israelites had lived in Egypt. Generation after generation had been born in slavery, the burdens of their Egyptian taskmasters pressing harder and harder upon the subject race. Everything possible was done to break their spirit, even to the murder of their male

children. Moses was called upon to lead his rescued people to the Land of Promise and take possession of a country already inhabited by warlike tribes. A long period of preparation was necessary to fit the wanderers for their task. During the pilgrimage a new generation was born free from the demoralizing influence of slavery, and trained under laws of morality and health which have become the foundation of our civilization.

The law of Moses deals distinctly with the use of alcohol, in the form of wine. In the directions for the harvest it divided the product of the vineyard in the same manner that the grain of the field was apportioned. The first share was for a drink offering to the Lord. After that came the share of the owner of the vineyard. The third share was reserved for the poor as a necessary food. There is no hesitation or hypocrisy here. Wine is dedicated both to the glory of God and to the natural use of all the people.

So much, briefly, for the religious aspect of the question. The prohibitionists cannot base any legitimate arguments on the Christian or Mosaic dispensations.

Alcohol is a food in the broad sense, because under certain conditions it may be essential for the proper nourishment of the body. The alcoholic craving has its foundation in normal requirements.

16 *THE EIGHTEENTH AMENDMENT*

This, together with the fact that alcohol is a free gift of nature, will make it impossible to suppress its use by prohibitory laws. The passage of the Eighteenth Amendment has not changed the human system: it has merely put back the cause of temperance a hundred and fifty years. Anyone can make alcohol. Indeed, in many of the products of the kitchen, where sugars and acids are combined, the housewife must exercise the greatest care to avoid making it. The American people had become accustomed to buying their alcoholic beverages ready made. The manufacture was in the hands of a very small percentage of the population and so was easily regulated. The Eighteenth Amendment has changed all this. America is fast becoming an immense brewery. The relation between supply and demand is not a matter of fiat, but of fact. The substitution, however, of tyros for experts in brewing and distilling, and of compulsory stealth for natural freedom, can scarcely be considered an improvement. Still, experience teaches; the novice becomes an adept, even under unpleasant conditions. There will be more and better illicit alcohol as time goes by.

The use of alcohol may be regulated, but not prohibited. So far from improving the morals of the people, prohibition will only increase hypocrisy and graft. There is not much doubt about this, for it has already happened.

CHAPTER III

THE HEALTH PLEA

Prohibition failed as a moral issue because the two great American religions were traditionally opposed to it. Something new had to be tried, and the success of the dry movement in certain Southern states offered a suggestion. Prohibition had made headway there because it was distinctly to the advantage of the South to remove temptation from the negro race. Self-interest is a powerful entering wedge for any argument, and the leaders of the dry campaign began a survey of the country in an effort to find interests which coincided with their own and which they could utilize.

Of course, the soft drink manufacturers were not overlooked. But while they might prove helpful from the financial standpoint later on, they were unorganized and of little influence in the country, and the selfish viewpoint would be altogether too obvious. However, three great and thoroughly systematized interests were found in receptive mood: the American Medical Association, the Life Insurance Companies, and the Standard Oil Company.

There were also certain other large corporations whose efficiency experts had been able to show that alcohol was increasing the cost of labor.

The American Medical Association maintained the most powerful trained lobby in the country. As far back as 1907 the association had an agent in each of the 2,830 counties of the United States, and its list of approachable political leaders numbered 16,000. Its interest was so distinctly on the side of prohibition that it has become the great power behind the movement. The financial backing of the other organizations was naturally of great importance. In addition, the life insurance companies were able to furnish valuable statistics, and the private charities of the Rockefellers offered a convenient cloak. How much the latter were influenced by their relations with Organized Medicine it is impossible to say. But the plea of health and human efficiency was given the premier position in the propaganda for prohibition.

In enlisting medicine in their cause the dry party acquired one of the most powerful agencies in our modern life, the influence of the family physician. In many a home in America this is a greater continuous force than any other. There are many stories to illustrate the doctor's prestige, but one will suffice.

Tucked away in the hills of New England is a

little village, the summer home of two intimate friends. As boys they had left this same village to make their way in the world beyond. They had been schoolmates together, and later on attended the same college. They were both interested in the same sports and pursuits, and the boyish friendship grew and ripened with the years. One of them took up the study of medicine; the other went into business and afterwards married. In the course of events a child was born, and who more fitting to attend at that critical period than the friend whom the father had learned to trust since boyhood? Other children came, and the physician, then a rising practitioner, cared for them through the illnesses of childhood, and the children learned to trust their father's friend. And finally there came a time when the doctor was called upon to share in the family's affliction. The wife and mother, through an unfortunate accident, was injured beyond the curative power of any physician. But day and night he watched at her bedside, alleviating pain wherever possible and giving the immeasurable comfort of his presence and skill. If anything could add to that household's love and respect, it was his sympathy with their loss, his comprehension of their grief.

You may wonder, perhaps, as to the precise application of this episode. It is given here because

it is typical, not merely individual; because there are thousands of similar cases throughout America. Think of what that must mean; the enormous influence exerted by such physicians amongst the members of innumerable families. And this influence, in itself so natural and splendid, is being exploited in a partisan cause and for special and specious interests. The general practitioner himself has not much choice in the matter. It is difficult for him to oppose for any length of time the settled policy of his professional organization. It is almost impossible for him to remain in the association and defy its crushing disciplinary powers, open and covert. He can try to do so, of course, if he chooses. Others have sometimes made the attempt,—and sometimes regretted it. As an alternative, the practitioner may resign his membership in the association and become an “outlaw.” But that involves a new professional outlook, the severance of old ties, the uprooting of fixed habits, and an absolutely fresh start. Besides, he has still to face the resentment of the organization, which does not readily forget; and there is no efficient outlaw organization to which he can turn for protection. It is not surprising, then, that the harassed practitioner, when he differs from the views of the authorities, should decide to feign an acquiescence that he does not feel. Only the prom-

inent and pushing—the leaders of cliques and factions—have the privilege of self-assertion in medical circles. The rank and file have to be content with obedience, or the black list.

CHAPTER IV

ORGANIZED MEDICINE

To understand the recent opposition of Organized Medicine to alcohol, it will be necessary to trace the development of this great power through its earlier stages, describing in some detail the various incidents and influences which have led up to the present situation. Many of them are extremely instructive.

Beginning in a small way, in the meetings of the town and county medical societies for the discussion of scientific matters or social betterment, a huge organization has been built up. Gradually, the agents of this organization have obtained positions of importance in the various institutions and establishments concerned with the national health, until finally they have taken over the complete control of our medical departments, both state and federal.

Before the days of Pasteur the science of medicine was little more than a mosaic of superstition. The physician had learned to recognize certain diseases and often obtained definite results in treatment, but the causes of disease, its progress and the reactions

of the body, were obscured. Of all the applied sciences, medicine was the most backward. With the discovery of germ life, and its relation to pathogeny, a new era commenced. One after another, the organisms which are the cause of our various diseases were isolated. And this knowledge was closely followed by the discovery of the curative forces of the body itself. A wonderful and supremely important field of research was opening before the eyes of the scientific world.

No one can take even a casual glance into the maze of serum therapy without being impressed by its intricacies and the tremendous amount of labor necessary for its exploration. Especially is this true of the body's own curative forces. Little by little, and only after the most painstaking research, was the knowledge of these forces obtained, one truth, found after years of study and experiment, leading on to another until finally nature's marvellous mechanism was revealed in its entirety.

This work was accomplished by the scientists of Europe. The names of Pasteur, Metchnikoff, Bordet, Ehrlich, Behring, Pfeiffer, Wright and Douglas, will always be associated with the great achievement. The fact that America, though leading the world in other lines of effort through the inventive genius of her scientists and mechanicians, nevertheless played so inconsiderable a part in medical de-

velopment was due to the code of ethics originally foisted upon American practitioners by their European brethren. Well-meaning in principle, this code was fatal in practice. It was found depressing even in the environment of its birth. Here, it was impossible.

The economic situation was an important factor. America was then in the midst of a tremendous industrial boom. The great corporations were offering large financial inducements for the best brains that the country could produce. The natural law of supply and demand will apply whether the commodity is the brains of a scientist or a sack of potatoes. The medical code required—and still requires—that any discovery or invention for the more effective treatment of disease should be given to the world for its free use. It is this old world theory, denying the right of the skilled practitioner to the product of his labor, which has done more than anything else to retard the advance of medicine in the United States. Deprived of its legitimate rewards in the medical field, genius was inevitably diverted into other channels. There was too much competition for it to remain where it would only stultify itself. The laborer is worthy of his hire, and for priceless labor it seems rather ironic to receive no price at all.

I have recently had an opportunity of discussing

this question with a bacteriologist of international reputation. In explaining his point of view he told the following story. When Behring perfected his antitoxin for diphtheria, he attempted to patent it. He was prevented from doing so because his colleagues did not think, in view of the work which others had done and by which he had profited, that he alone should reap the reward; for although they had failed, his success was built upon foundations which they had established. If a reward was to be given it should be distributed among all (or on behalf of all), living or dead, who had contributed to his final triumph. That may seem to some a counsel of perfection; to me it seems simply a plea of ineptitude. Our civilization would be in a curious state if the creators of our steam engines and automobiles had been denied patents, because someone in a prehistoric age had used the wheel on the ox-cart; or if perfecting the open-hearth furnace had brought no reward from the steel industry because some antediluvian ancestor had employed fire in broiling a steak.

As a result of the success of the foreign investigators, the practising physician became dependent upon Europe for his medical knowledge. It must be remembered that during this period the science of medicine was making tremendous strides. More was being accomplished than in all the years since

26 THE EIGHTEENTH AMENDMENT

Hippocrates. Our institutions were kept busy testing the theories of the European schools and passing them on to the practitioners. These institutions of research thus became clearing houses and distributing points for the new medical facts, and the control of medicine centered in the hands of the few who were able to speak with authority. With such a foundation it was a comparatively easy matter to build up a political machine whose power has never been exceeded, unless by the religious organizations of the Middle Ages.

And then occurred the very thing which the code of medical ethics was intended to prevent—the commercializing of medical knowledge. Our medical authorities embarked upon the manufacture of the newly discovered biological products, some openly, others *sub rosa* through the medium of their more venturesome associates. And although many of these vaccines and serums proved complete failures, they were marketed in large quantities.

With the completion of their organization, one of the first movements undertaken by the medical ring was a campaign against the patent medicines. There had grown up in the country a great business, the manufacture of nostrums. Some of these were utterly worthless, others contained drugs which anyone could procure from the corner pharmacy. They were prepared in fancy packages, under high-sound-

ing titles, and sold to the credulous and unwary. They had already been condemned by the practising physician because in many instances the beneficial effect was at best illusory, while they were often definitely detrimental either through harmful ingredients or through the ignorance and improper use of the buyers—"addicts" as many of them could justly be called, for the patent medicine habit has a tendency to become chronic. The campaign against these nostrums unquestionably strengthened the hands of the medical authorities, both with the sensible portion of the lay public and with the general body of practitioners, who naturally did not wish to see their lawful practices thus cut into, to their own loss and the manifest danger of their patients.

The campaign was conducted along two lines, the education of the public and the passage of inhibitory legislation. The association leaders attempted to stop self-medication by making it necessary for the layman to obtain a doctor's prescription before he could purchase even the simplest form of drug. Failing in this, they tried to force the publication of the formulas of all proprietaries. The necessary legislation was pushed in every state and in Congress; the bills are part of our legislative records. In this campaign we see the first leaning of Organized Medicine towards prohibition. Speaking before a meeting of the Women's Christian Tem-

28 *THE EIGHTEENTH AMENDMENT*

perance Union at Nashville, Tennessee, the spokesman of the American Medical Association said: "The average drug-store in the United States is little more than a saloon for the sale of disguised alcohol and 'dope' under the pretence of patent medicines."

The drive against the proprietary preparations had a very important though unforeseen effect, and the American practising physician became the chief sufferer. The campaign was conducted on such broad lines that not only was it directed against the fake nostrum, but even the legitimate proprietary was attacked. Improvement in drugs was thus discouraged and the physician had to look for his medicines to the countries, particularly Germany, whose laws encouraged pharmaceutical chemistry.

This was not the only result. The propaganda against drugs was pushed so vigorously that it began to create a doubt in the minds of the public as to the value of drugs in the treatment of disease. This idea was supported for financial reasons by the manufacturers of the various biological products, who were aided by their partners in official positions. As a consequence the regular school of medicine, which had relied on drugs from time immemorial, suddenly found itself confronted by a new and virile cult, the school of drugless medicine. How serious a menace this has become to the prestige of the regular practitioner is shown by the fact

that these "physicians of health"—the osteopath, the chiropractor, the dietician—are now able to claim that their clients number twenty-eight millions.

It must not be supposed that the regular physicians were satisfied to see their patients slip away from them. There was much criticism, even ridicule, of their leaders, and in some instances open rebellion. But in the majority of cases the practitioner decided that it was politic to retain his membership in the association. However, it began to dawn upon him that some of the medical authorities were lining their pockets at his expense.

In all this, serum therapy played an important part.

CHAPTER V

THE SERUM CONTROVERSY

When we consider that for centuries man had been groping in vain for the causes of disease, it is easy to account for the strong appeal of the new science. After it was discovered that a small amount of serum derived from a horse which had been inoculated with the diphtheria bacillus would protect a human being against the specific toxin of the disease, it was thought that within a short time successful preparations would be secured from the germs of other diseases. We now know that there is great variety in pathogenic organisms and that many of them do not yield to serum therapy. Nevertheless, certain definite results had been achieved and our medical authorities were able to obtain support for their work in government appropriations and large contributions from private individuals. In addition, valuable publicity was secured from the press of the country. With this support, it was a comparatively easy matter to persuade the practitioner to accept serum therapy.

But it soon became evident that the authorities had

been over-sanguine and that serum therapy was far from accomplishing all that had been hoped for. The failure reacted against its advocates and opened a point of attack for the osteopath and chiropractor, which they were not slow to use to advantage. It is quite possible that the newer medical schools would have been content to "live and let live." They had received some recognition from the regular practitioners, who occasionally called in their assistance. But Organized Medicine, jealous of its control, undertook a campaign against them, hoping to limit their practice by legislation. In some of the states this was actually accomplished; and so the newer schools felt compelled to retaliate. The following, taken from Dr. Alma C. Arnold's "The Triangle of Health," will serve as an example of their methods:

"Infantile Paralysis and Vaccination: Do you know that infantile paralysis often follows vaccination? (See report by James A. Loyster of investigations of 54 cases of illness and death from vaccination in New York State during 1914, and statistics.)

"Do you know that investigation of the epidemics of 1907 and 1916 produced strong evidence that they were started from vaccine virus? (See New York *Herald* for September 28, 1916.)

“Do you know that the United States Government proved that the epidemics of foot and mouth disease, which swept this country in 1902-3 and 1908-14, were started from vaccine virus? (See Bureau of Animal Industry, Circular No. 147, and Farmers' Bulletin No. 666.)

“Do you know that hundreds of United States soldiers on the Texas border have suffered from paratyphoid fever caused by typhoid vaccination? (See newspapers and Army Reports.)

“Do you know that the cases of typhoid fever among the Spanish-American war soldiers in 1898 (before the discovery of typhoid vaccine) amounted to 8.8 per cent.? (See U. S. Army Reports.)

“Do you know that when the 14th Regiment N. Y. N. G., U. S., arrived at Camp Whitman from the Texas border, the cases of paratyphoid, together with the healthy active carriers, amounted to 17 per cent.—double that of 1898? (See N. Y. Health Department Reports.)

“Do you know that paratyphoid fever is human hog-cholera? (Appleton's *Medical Dictionary*, January, 1916, defines it: 'Paratyphoid—resembling typhoid fever or the typhoid bacillus. Paratyphoid bacillus—an organism belonging to the hog-cholera group, which causes paratyphoid fever.')

"Do you know that nearly 70,000 British soldiers (all vaccinated for typhoid immunity) were sent home from the Gallipoli Peninsula with tuberculosis, and as a result compulsory vaccination has been abolished in England? (See report of speeches in the House of Commons.)

"Do you know that New York City statistics show that cancer has increased there fully 225 per cent. since 1870? (See Board of Health Report.)

"Do you know that cancer and tuberculosis are traced by specialists to blood debasement from vaccination? (See writings of Sir Robert Bell, for 43 years cancer specialist in London; and many others.)

"Do you know that, contrary to the general belief, the wide use of diphtheria antitoxin has neither lowered the number of cases, nor the deaths? (See Report of special inquiry by the New York City Health Department, published in the *New York World* for June 12, 1916.)

"Do you know that the Flexner serum for cerebro-spinal meningitis was injected into 15 children in the City Hospital of Cincinnati, Ohio, and that 14 died within five minutes? (See full report in the Cincinnati *Enquirer* for March 18, 1914.)

"Do you know that the recurrence of the out-

34 *THE EIGHTEENTH AMENDMENT*

break of foot and mouth disease in 1916 was due to anti-hog-cholera serum? (See Report of the Bureau of Animal Industry for September 28, 1915.)

"Do you know that, following this discovery, the Canadian Government passed a law prohibiting the use of these serums?

"These are facts! Can you disprove them, or do you know anyone who can?"

In thus striking at serum therapy, the newer schools were aiming a blow at the very foundation of the medical power. Mystery, like superstition, has always been a golden key in the hands of those whose superior knowledge enabled them to use it. Anybody who has followed the medical items in the public press will recall how consistently the mysteries of serum therapy have been overworked to reassure the public during the recent epidemics, and to allay the general clamor at the failure of the measures adopted by the medical authorities. These attacks were continued in pamphlets and in paid advertisements in the newspapers. That they were not without effect is shown by the difficulty which the advocates of serum therapy began to experience in obtaining government appropriations for their work. Serious as this might appear to those who aimed at the permanent control of medicine in the United States, a still graver danger threatened.

CHAPTER VI

A NEW FACTOR

Among the many brilliant investigators whose names are associated with the solution of the disease problem, probably no one accomplished more than Paul Ehrlich. One of our greatest authorities on infection and immunity calls him the "Grand-master of experimental medicine." It was Ehrlich who demonstrated how the body, when attacked by pathogenic organisms, produced its antibodies, thus elucidating one of the most important problems in medicine, that of nature's second and final defence against disease. His side-chain theory has now passed many corroborative tests and is generally accepted by the medical profession.

This discovery was of the greatest importance, because hitherto it had been supposed that once the mechanism of the body was understood, the control of disease would be assured. Ehrlich was able to show that if the infection exceeded a certain degree of virulence, it was too powerful for the curative forces of the body. But in other sciences man has improved on nature's methods, and Ehrlich turned

36 THE EIGHTEENTH AMENDMENT

to the germicide to find a power greater than nature herself was able to apply just where and when it was needed. Antiseptics had come into very general use for the treatment of all infections of the outer parts of the body, and they were widely employed in sanitation. Further, it had been shown that the effectiveness of some of the drugs of the older pharmacopœia was partially due to germicidal properties. Ehrlich began a series of experiments with a view to obtaining a germicide which could be used effectively *in the body*. And thus a new theory in medicine, chemotherapy, was born.

The ordinary germicide is so poisonous that any attempt to employ it in the body for the destruction of a parasite would also prove fatal to the host. This was clearly the first difficulty to overcome. There are many chemicals with germicidal properties whose toxicity can be partially or wholly neutralized by combination with other chemicals. Ehrlich conceived the idea of producing by chemical combination a germicide which, though the toxicity had been eliminated, would still retain sufficient germicidal power to be effective in medication. A second very serious difficulty was encountered. It soon developed that a germicide might prove effective in the laboratory test tube but not when taken into the system, where it entered into a chemical combination with the albumins of the blood and so lost

its germicidal power. Ehrlich, however, was not to be baffled. Chemical after chemical was combined, and at last, in his six hundred and sixth attempt, he produced his Salvarsan. While Salvarsan was not entirely effective it served to demonstrate the correctness of the theory; and it was followed by a later combination on the same lines, Neo-salvarsan.

In 1909 and 1910 Ehrlich published treatises on his experiments in chemotherapy. These created a profound impression on the leaders of Organized Medicine. It was realized that if his theories were sound, chemistry would play the chief part in medicine in the future and the chemist who produced a perfect germicide would be in a position to dictate to the profession throughout the world. If chemotherapy should replace serum therapy, the vast sums which the manufacturers and other advocates of serum were receiving might be turned into another channel. It was even within the bounds of possibility that chemists might be able to establish their right to places on the medical boards. Then, too, chemotherapy might be adopted by the newer schools of medicine and the union of these two interests form a combination which it would be difficult for the organization to withstand. There seemed but one way out, the passage of such laws as would insure complete control to the association.

During the legislative campaign against patent

38 *THE EIGHTEENTH AMENDMENT*

medicines it had been demonstrated that restrictive laws could not be passed without outside help. There had been some successes, such as the passage of the laws relating to habit-forming drugs. But the legislatures were unwilling to restrict pharmaceutical chemistry to the point desired by the medical trust. The success of the drug law, however, suggested a way out of the difficulty. If, through a trade with the prohibitionists, the association should be able to put whisky on the prescription shelf, it would be but a short step further to extend the law to proprietaries containing alcohol. And this might be pushed further still to cover all pharmaceuticals, including germicides, once the people had become accustomed to government regulation in such matters.

But time went by, Ehrlich died, and no chemist had been able to produce an effective internal germicide, although both European and American experts had made many attempts. The medical trust began to breathe more easily. This, however, was not to last. In 1916 the American Medical Association was notified that a new germicide had been produced and that its effectiveness had been substantiated by careful experiments. Some time was spent by the organization in verifying these facts and in negotiating for the control of formulas and process. But it was evident that control could not

be established in this way and that legislation must be resorted to. A time for action had come at last. At a meeting of the association held on June 6, 1917, Dr. Charles H. Mayo made a strong address in favor of national prohibition, and at a later meeting of the House of Delegates the following resolution was passed:

"Whereas, We believe that the use of alcohol is detrimental to the human economy, and

Whereas, Its use in therapeutics as a tonic or stimulant or for food has no scientific value; therefore be it

Resolved, That the American Medical Association is opposed to the use of alcohol as a beverage; and be it further

Resolved, That the use of alcohol as a therapeutic agent should be further discouraged."

The medical value of alcohol was known to the Babylonians and Phœnicians, and probably in the days before history was written. Yet in one sweeping statement the accumulated experience of centuries was thrown overboard. There is no more conservative element in society than the medical profession; its traditions and training all tend toward conservatism. How was it, then, that it permitted its leaders to put through anything so radical? In the first place, the sentiment was not unanimous.

There was a strong minority feeling against the resolution and, following its passage, the question was agitated for months in the medical press. But the theories of Ehrlich's followers were also revolutionary. Medication by germicide was in some respects a complete departure from established practice, and the very conservatism of the physician favored the passage of the resolution as the choice, if one must be made, between two evils.

The medical practitioner receives his compensation, in most instances, on the basis of the number of visits made. Preventive medicine, in spite of its boasted achievements, had not interfered with this method of charging. But Ehrlich's followers had demonstrated that the germicide would materially shorten the period of illness. Its adoption therefore would reduce the physician's income until a new system of arranging fees should be put in force. This would not be difficult to devise, and common sense clearly calls for it. But the inertia of the profession and the acquiescence of the public have so far preserved the old way. That is natural enough, no doubt; custom clings. But some clinging cloys. However, the antiquated fee system played its part, as has just been indicated, in the attitude assumed by the profession toward the two questions of pressing importance brought before it—prohibition and chemotherapy.

CHAPTER VII

THE SIGNIFICANCE OF CHEMOTHERAPY

Society has long been looking for some method of treatment that will shorten the period of disease. Sanitation and preventive medicine have indeed done much to reduce the toll which sickness exacts from civilized communities. Nevertheless, there are still many diseases which appear periodically and run their course undeterred by scientific effort. There could be no more important contribution to national weal and wealth than cutting the waste caused by disease. This is one of the arguments used most frequently by the prohibitionists. We may therefore consider briefly the theories of the chemotherapists and see what, with the help of the prohibitionists, Organized Medicine was attempting to suppress.

Since the earliest days of medical science the cure of disease has been accomplished by the natural powers of the body. In cases where nature's defence and the attacking force of the infection approach equality, the physician's influence may be the decisive factor. By the use of drugs he may reduce fever,

42 *THE EIGHTEENTH AMENDMENT*

relieve pain, correct intestinal disorders or stimulate activity in some organ; or by means of serum he may add to the protective forces which the body itself produces. But, in a large measure, we have relied on nature to accomplish the cure.

The defensive forces of the body may be divided into two classes: those which are available at the time the infection occurs, and those which develop as the direct result of the infection. In the first class are normal serum and the power of the white blood corpuscles and other phagocytes to ingest disease germs. In the second class are the various bacteriolytic and antitoxic antibodies which are liberated by the cells after disease has found a footing in the system.

Infectious disease is caused by minute organisms which make their way through the outer coverings of the body into the system proper. This is termed infection. When it occurs the organisms or germs are met by the first defence of the body, the white blood corpuscles gathering at the point of invasion and taking up and destroying the invaders. If the germs are able to overcome this first line of defence, they multiply and infection develops into infectious disease. The system then calls upon its second defence, the antibodies. From this stage onward the conditions are those of a great battle (in its own sphere), each side bringing up its reserves in large

numbers; the germs, it may be, attempting to prevent antibody formation either directly, by the action of their toxins on the cells, or indirectly by their effect on the organs. Thus the disease advances to a crisis, the outcome depending upon the relative strength of the contending forces. All this involves of course a great strain on the body, and when the conflict is over and victory won, nature requires a period of convalescence to repair the incidental damage.

In putting forward its secondary defence the body is responding to a stimulus, the presence of the germs in the system. In other words, it reacts to the infection. Antibody formation, or the manufacture of the body's own germicides and antitoxins, is not carried on actively until the infection has become established. Valuable time is thus lost while the system is adjusting itself to meet the invasion: unpreparedness, here at least, has its manifest dangers. Ehrlich's followers were able to demonstrate that a greater germicidal power than that of the body itself could be applied as soon as the first symptoms gave warning of the infection, and that the germs could be destroyed in the body by means of a chemical germicide long before nature could produce antibodies in sufficient number to affect the situation. Thus the progress of the disease could be appreciably shortened, and in consequence a long period of con-

44 *THE EIGHTEENTH AMENDMENT*

valescence avoided. But the chemotherapists went even a step further. They advanced the theory that the poison of disease in virulent form is almost as rapidly destructive as some of the mineral poisons and that often the time is limited in which successful treatment can be undertaken. Not only, then, did they advocate a treatment which would materially shorten the period of illness, but they went so far as to say that disease must be cured at once unless the physician would risk the loss of his patient.

There is nothing extraordinary in the opposition of the medical association to the germicide. It is not unprecedented for established interests to oppose the innovations which mark the advance of civilization, though they have always been forced to admit their error later and acknowledge the benefits which have come to them as to the rest of mankind. When textile machinery was introduced into England, it was met with riots and arson. At that time the Manchester weavers numbered five thousand. Just prior to the Great War this number had risen to nearly thirty thousand, while individual yardage had increased eight or ten times, though the population had not more than doubled. Comparatively recently, the introduction of the automobile was looked on with disfavor by the horse and carriage trade, from the manufacturer down to the lowest groom. Yet the prosperity enjoyed by the manufacturer who

has adopted the new vehicle has never been equalled in industrial history, while the coachman or groom has materially bettered himself by accepting the chauffeur's position.

It is to be hoped that Organized Medicine, duly concerned with its own material interests, will realize that a living patient is more profitable than a dead one, and that it will be better for the physician to keep his patients alive even though a cure is effected in a fewer number of chargeable visits.

CHAPTER VIII

A PROFITABLE PARTNERSHIP

The resolution of the American Medical Association condemning alcohol was of the utmost importance to the advocates of prohibition. They realized fully that without this support it would be difficult to maintain the constitutionality of the Eighteenth Amendment. American institutions, including the Supreme Court, were created to carry out certain principles laid down in the Declaration of Independence. Among these was the right of every man to live—apparently not an unreasonable proposition.

“We hold these truths to be self-evident, that all men are created equal; that they are endowed by their Creator with certain unalienable rights; that among these are life, liberty, and the pursuit of happiness. That, to secure these rights, governments are instituted among men, deriving their just powers from the consent of the governed.”

If alcohol were necessary either as a food or a medicine to maintain life, then prohibition and the

law for its enforcement would be clearly contrary to the spirit of the Constitution. There was a decision of the British courts declaring alcohol to be a food. That was not a legal precedent for America, but it showed that an American precedent might easily be established. By some, alcohol was considered almost fundamental in the treatment of disease. If this could be maintained, no law could stand that would make it necessary to pay toll to a small privileged class to obtain a commodity, simple but indispensable, which can be manufactured in the home far more easily than most foods can be prepared. The resolution got around these difficulties by the statement that "alcohol is detrimental to the human economy." Thus the anomalous situation was created that the legality of an amendment to the Constitution of the United States might become dependent not upon the decision of the Supreme Court, but upon the fiat of a medical junto whose avowed purpose was to safeguard "the material interests of the medical profession."

A programme had already been adopted by the association's Committee on Legislation. An examination of the various bills that have been introduced from time to time will give some idea of the scope of this programme. They provide for the following:

Control of medical education and license to practise, including suppression of independent opinion and conduct.

Compulsory publication of proprietary formulas and control of the sales through physicians' prescriptions.

Compulsory health insurance, or, in other words, a state subsidy for the organized profession.

To these was now added the sole privilege of dispensing alcohol. The monopoly would serve two purposes. It would help to accustom the public to medical control of foods and drugs. It would prove remunerative, and thus restore some of the income which had been lost to the profession through the active competition of the osteopaths and other health schools. How lucrative prohibition has actually proved to the medical profession is shown by a recent statement of the federal prohibition director of the State of Illinois. In the City of Chicago, where the headquarters of the American Medical Association are located, during the first four and one-half months of national prohibition five hundred thousand physicians' prescriptions for whisky were issued, and the federal department estimates that of these, three hundred thousand evaded the spirit or letter of the enforcement law.

To put the association's programme into effect, control of the legislatures would be necessary. It was also deemed advisable, if possible, to place a physician in the White House. This could only be accomplished with strong financial backing, but the support given to the prohibitionists by the association was worth any price which might be demanded. The necessary supplies could be obtained from the life insurance companies, whose medical departments may be classed as a branch of Organized Medicine, and through them from other great corporations, many of which are partly controlled by the insurance companies through their investments.

CHAPTER IX

THE OTHER PARTNERS

In 1908 the life insurance companies undertook an investigation of the mortality among their policy holders. A committee of actuaries and medical directors was appointed, of which Mr. Arthur Hunter, the Actuary of the New York Life Insurance Company, was chairman. The material was taken from the records of two million policy holders and the inquiry covered the period from 1885 to 1908. Careful attention was directed to the mortality among those policy holders using alcohol and the results were classified according to the degree of their indulgence. The mortality among those engaged in the various branches of the liquor trade was ascertained separately, and the figures compared with the general average of insured individuals. From these statistics it was apparent that alcohol (or its environment) was distinctly unfavorable to longevity. Still, no attempt was made to analyze the different conditions prevailing among total abstainers, so that no comparisons could be carried out to determine how much of the increased mortality was

actually due to alcohol, and how much could be attributed to unhealthy surroundings and other factors.

Life insurance is run on a strictly business basis. The lower the annual premium, the better showing life insurance will make when compared with other forms of investment. If prohibition would improve the mortality table by increasing the general expectancy, the insurance companies could well afford to devote a few years' savings towards the cause, and this in itself would amount to an enormous sum. But aside from financial support, the coöperation of the life insurance companies was of special value because their statistics could be used to place prohibition in an attractive light before the corporations of the country. In recent years a great deal of time and thought has been given to increasing the efficiency of our industrial life. It is not surprising that alcohol should come under the unfavorable notice of the experts. In some instances it was unquestionably increasing the cost of labor by depriving the employer of services for which he had paid and to which he was justly entitled. In addition, there was some waste of raw material through bad workmanship. All this could be traced directly to alcohol, but on the other hand there were no means of computing its benefits, as the increased efficiency due to a higher standard of health or morals was problematical. The efficiency expert is seldom

an economist, and further, he has to depend on others for technical information. It is not surprising, therefore, that he was able to see only one side of the prohibition question.

On account of our great natural wealth, American industries are growing at a rate which exceeds the natural increase of our population. This country is consequently dependent upon immigration for a considerable part of its labor requirements. During the past 145 years thirty-three million immigrants have entered the country. In 1913, the last year before the tide of immigration was interrupted by the Great War, the net increase of population from foreign sources was 891,276. In 1919, the year after the signing of the armistice, with national prohibition an assured fact, this increase amounted to only 20,790, and this, too, in spite of the unprecedented rise in wages and the fact that American taxes are largely borne by the capitalistic class. It was not until it became apparent that national prohibition could not possibly be enforced that immigration began to resume its normal flow.

But there is still another side to the effect of prohibition on the labor situation. The further we descend in the social scale, the less man depends for guidance upon reason and the more he has to rely upon his instinct. The lower animals, if left to themselves, can trust their instinct to select the food

which their bodies require. It is only when man or famine interferes that we find malnutrition in our wild or domestic animals. Similarly, the laboring classes under normal conditions eat and drink to restore the tissue which has been burned up in bodily exercise. Prohibition deprived them of a nourishment to which they had become accustomed, and no amount of reasoning on the part of those who did not share their conditions could convince them that this was right. Nor were all affected in the same way. It is an instructive commentary on the blundering fashion in which the matter was approached, that the efficiency experts apparently did not know that many of our foreign laborers were obtaining their alcohol in wines and other beverages made in their own homes. This was especially true of the Italians. There was hardly an Italian home with any ground around it which did not contain its little vineyard; and those less fortunate were often supplied by their neighbors. Interference with such a system, both primitive and picturesque, was bound to add to the general discontent; and even a small dissatisfied element is a dangerous thing in these days of labor unionism, since it often becomes an effective club in the hands of a radical leader. All this was pointed out to the prohibitionists by the officers of the American Federation of Labor, and subsequent events have justified their warning.

But in the case of the Standard Oil Company there were stronger reasons than the mere increased cost of labor for joining in any movement which had the approval of the American Medical Association.

In 1901 the Rockefellers entered the medical field. There could be no more important public service than that for which the Rockefeller Institute for Medical Research was established. It was with a feeling of general satisfaction that the public viewed this enterprise of our richest citizen, and it was not through any fault of the founder that the undertaking failed to fulfil its object. The institute was handicapped from the beginning by the fact that it had to look for its workers amongst establishments already controlled by the association or in sympathy with its aims and methods, and thus the blight which has hung over medicine throughout the country was inevitably introduced into the new foundation.

While little has been accomplished from the scientific standpoint, the union of these two interests has been a great success commercially. The Rockefeller support of the tenets of the association has aided the latter materially in its conflict with the newer schools. The reports of the institute have been valuable propaganda for the medical organization. No one could well question the disinterestedness of these reports, and yet there were influential men within the institution who were able to guide its

activities along the lines best suited to the interests of the association.

In return, the association has put the stamp of its approval on the petroleum laxatives manufactured by the Standard Oil Company. These products sell for four times the price petroleum brings for illuminating purposes. But the use of mineral oil and other laxatives has been condemned both by the physicians of health and the chemotherapists as a worthless and dangerous practice. If Mr. Rockefeller's scientists had by any chance communicated to the officers of his company the plans to discredit the newer schools, they could scarcely have proved objectionable to the sales management of the Standard Oil Company. Nor could any individual—certainly not Mr. Rockefeller himself—be blamed for this condition of affairs. It is the system which is at fault. To-day the science of medicine is an open book to the initiated, but through a complicated system of technical terms and hieroglyphics it has been made a mystery to the layman, a mystery as fascinating and sometimes as misleading as the fairy tales of our childhood. The management of a great corporation is carried on through a series of departments and the responsibility is divided, from the president or chairman of the board down to the lowest clerk. It was sufficient for the officials that Mr. Rockefeller was

56 *THE EIGHTEENTH AMENDMENT*

willing to back this charitable enterprise. They trusted to a business acumen which until then had never been at fault. Nor are his scientists to blame. The system of medical education in the United States reaches down to the primary schools. If a man is forced to wear red or blue glasses from boyhood, he is apt to become color blind.

And so we find a collection of associations and corporations whose interests were all closely allied. Yet it were foolish to assert that prohibition was the result of an arch conspiracy, although there was much plotting and planning within the organizations themselves. Each of these interests was probably going quietly along, minding its own business, like cattle grazing contentedly on a wide plain. Then somebody started something, and the stampede came off.

And what about the Anti-Saloon League? A very interesting sidelight on the part played by this organization has recently been disclosed. It seems that when certain prominent citizens of Georgia decided that for political reasons the state must become dry, they encountered the opposition of the league's representatives. For years these men had been living on prohibition. Time after time the law had been brought to the point of passing, only to be held over for a future legislature because they feared that with prohibition the services of the

league would no longer be needed. When the new interests took charge of the national movement, the Anti-Saloon League was assigned to a place which it could fill to the advantage of the cause, but in which the Georgia fiasco would not be repeated. The last days of Demon Rum resembled a tiger hunt in the jungles of India; the Anti-Saloon League were the beaters. The organization was well equipped to play the rôle. Men of the stamp of William H. Anderson, Pussyfoot Johnson, William Jennings Bryan, R. P. Hobson of *Merrimac* fame, and Wayne B. Wheeler, the cock-horse of the Volstead Committee, could be depended on to supply the noise. But the men with the guns loaded with silver bullets represented those interests which had something more at stake than simply removing the curse of alcoholism from the weakling.

If there is still any doubt in the mind of the reader as to the real power behind the prohibition movement, let him examine the foreword written by Professor Irving Fisher for Dr. Fisk's book "Alcohol—Its Relation to Human Efficiency and Longevity." The following is a brief extract:

"Many things are now known concerning the effects—physiological, psychological and social—of alcohol, which were not known a few years ago; and there is, consequently, a growing desire

on the part of men of affairs to learn the exact facts and to make use of this knowledge in their business. Indeed, it may be said that the chief driving force to-day toward temperance and total abstinence, whether voluntary or enforced, is an economic force—the constant urge toward industrial efficiency. It is this new force which, added to forces previously at work, has in recent years caused the tidal wave of prohibition to sweep over this country.”

CHAPTER X

SOME PROHIBITION PROPAGANDA

It may be only a coincidence, but the fact is nevertheless worth recording, that Dr. Fisk's book on alcohol, the resolution of the American Medical Association denouncing alcohol, and the association's condemnation of the chemotherapists, appeared within a few days of one another in the summer of 1917. Dr. Fisk's book presents the life insurance companies' case against alcohol. It is possibly the most ambitious presentation of the prohibition question from this standpoint. It has the endorsement of many prominent members of the American Medical Association sitting on the Hygiene Reference Board of the Life Extension Institute.

Dr. Fisk's writings did much to further the cause of prohibition. They acquired a wide circulation—many of his chapters having previously appeared in the form of magazine articles. They may therefore be considered as typical examples of prohibition propaganda. The book itself is more of a compilation than an individual effort. The author seems to have taken the prohibition arguments—many of them

manufactured in the laboratory, away from actual living conditions—at their face value, and to have passed them on to his readers without any attempt to analyze them. It is not so much what Dr. Fisk has said as what he has left unsaid that brands many of these representations as the rankest sophistry. For example, under the heading of “Alcohol and Resistance” we find:

“Fillinger found the resistance of the red blood-cells much reduced after administration of champagne to healthy human subjects, and similar results were found in dogs and rabbits. Weinberg confirmed these results by similar methods, showing that 20 per cent. of the red cells lose their resistance after the administration of 450 cubic centimetres of champagne.”

Here is a direct accusation against alcohol and a very serious one, for antibody formation, the body's natural defence against disease, is dependent on the health of the cells.

Champagne contains about 13 per cent. of alcohol. If it were the alcohol in this beverage which caused the injury to the red blood-cells, we might reasonably expect a similar result from other wines or malt liquors in proportion to their alcoholic content. As this is not the case, we must look further for the harmful effect of champagne. Now champagne

contains a deadly poison, carbon dioxide (CO_2) or carbonic acid gas. There is probably more of this gas in champagne than in any other beverage. Any little chorus girl along Broadway will tell you that the popular name for the popular wine is "bubbles." If we turn to our chemistry we find:

A rose placed in a glass bulb from which the air is removed while CO_2 is introduced will lose its color at once.

An animal introduced into an atmosphere of pure CO_2 dies almost instantly and without entrance of the gas into the lungs, death resulting from spasm of the glottis (ventricle of the larynx) and consequent apnœa (absence of respiration).

An animal will die rapidly in an atmosphere composed of 21 per cent. O (oxygen), 59 per cent. N (nitrogen), and 20 per cent. CO_2 by volume; but it will live for several hours in an atmosphere whose composition is 40 per cent. O, 37 per cent. N and 23 per cent. CO_2 . When present in large proportion, CO_2 produces immediate loss of muscular power, and death without a struggle; when more dilute, a sense of irritation of the larynx, drowsiness, pain in the head, giddiness, gradual loss of muscular power, and death in coma.*

* "The Medical Student's Manual of Chemistry"; Witt-
haus, pp. 355-6.

This is the reason for the seriousness of the "champagne jag." If Dr. Fisk has forgotten his chemistry, was there no one on the Hygiene Reference Board who could have brought these elementary facts to his attention? The doctor tells us in his preface that "The Board was practically unanimous in endorsing the author's presentation of the evidence, only a few members dissenting."

Here is another example.

The prohibitionists have endeavored to create the impression that alcohol is one of the chief causes of insanity. Dr. Fisk says, "Psychopathic conditions (i.e. those relating to mental disease), including excessive or palpably injurious indulgence in alcohol, developing after the 'risks' had been on the books (of the life insurance companies) must be accepted in the main as a charge against so-called moderate drinking. They are quite as much a possible effect of moderate drinking as any of the many other pathological conditions that are known to result from steady drinking, such as cirrhosis of the liver, fatty liver, or kidney affections, or the various forms of nervous disease or life-failure that may result from the psychic disturbances due to alcohol."* This is all in a piece with the statement of the prohibitionists which was circulated in the public press, that

* "Alcohol—Its Relation to Human Efficiency and Longevity"; Fisk, pp. 49, 50.

“the intemperate use of alcohol is filling our insane asylums, jails, poorhouses and cemeteries.” Let us see how near the truth these assertions are.

The total number of insane patients admitted to our hospitals in the year 1910, according to the figures of the Census Bureau,* was 60,700. Of these, 6,122, or 10.7 per cent., were suffering from alcoholic psychosis. Careful investigations showed that out of a total of 25,000,000 males who used alcoholic beverages, about 5000, or one-fiftieth of one per cent., developed alcoholic insanity annually. This is the basis for the statement that “alcohol is filling our insane asylums.” A further examination of these statistics showed that in a great many instances alcoholism was not the cause but merely a symptom of some inherent mental defect, either congenital or acquired. Dr. William A. White, superintendent of the government hospital for the insane (St. Elizabeth’s Hospital) at Washington, D. C., says in his paper on the subject, presented at a meeting of the Society for the Study of Inebriety:

“Is alcohol in these cases only a symptom of some underlying fundamental condition which has escaped our notice, simply because it is too subtle to be seen by casual observation or found by ordinary methods of inquiry? I think it is, and my

* The figures for the 1920 census are not yet available.

attention was first attracted to this possibility many years ago. Some of you at least will remember the work of the English hereditarian, G. Archdall Reid, 'Darwinism and Race Progress,' in which the author, who, I may remind you, has since written many able and learned works, undertook a statistical study of the effects produced by prohibition in several of our prohibition states, where prohibition statutes had been in operation for a considerable number of years. His conclusions were no less striking than unexpected at that time. They were to the effect that the statistics clearly indicated that in these states, as the consumption of alcohol had been diminished and as drunkenness had been lessened, the admission to the insane asylums and poorhouses had progressively and correspondingly increased. If we do not instantly discard such a conclusion as this, and will stop for a moment and give it careful consideration, we must be struck by the probability of its truth and by its important social significance. Such a conclusion can only mean that the alcoholic as such is a mental defective in some way, and that if his mental deficiency does not show as indulgence in alcohol, it will later show as a frank mental disease, or as that type of deficiency which leads to pauperism.

"This conclusion, I am convinced, is a correct

one, and I am reminded as I dictate these words of the occasion of a meeting of your society here at Washington some two or three years ago in which I heard your president, a man grown old in this particular work, say in discussion that he had never seen an inebriate who aside from his inebriety was a normal man."

But the most convincing evidence of the fallacy of Dr. Fisk's statement is furnished by the figures of the Census Bureau. These statistics show that in 1910 wet Nebraska had the lowest insanity rate of any state in the Union, while dry Oklahoma had, with the exception of Colorado and Nevada, the highest rate. In Maine, the banner prohibition state, the number of insane persons increased from 92.6 per 100,000 in 1890 to 169.5 per 100,000 in 1910, a gain in the wrong direction of 83 per cent. for the twenty year period. In Kansas, another prohibition state, the insanity rate increased 94 per cent. Wet Rhode Island, on the other hand, showed a gain of only 16 per cent. during the same period.

So far as suicidal insanity is concerned, Dr. John P. Davin, of New York, summed up unfettered medical opinion on the figures since prohibition went into effect, and placed the responsibility in the right place. Here is his letter to the press:*

* See the New York *World* for August 15, 1921.

66 *THE EIGHTEENTH AMENDMENT*

"That suicides have more than doubled, not in a year, as you state, but in half a year, according to the figures of the Save-a-Life League, is not to be attributed to a suicide wave. Neither is it to be attributed to a reaction of the war, to business depression or to loss of work.

"In a previous report of the Save-a-Life League the effects of prohibition and drug laws were emphasized as a factor in the increase which was noted by the society at that time also.

"Anyone at all familiar with the physical conditions associated with the use of alcohol or narcotic drugs knows that the deprivation of either is followed by a depression that speedily deepens into a contempt for life. This does not necessarily mean the abuse of these agents by those addicted to their use. . . . Crusades have been entered upon by the government, urged on by lay agents having no realization of the physical effects of their actions, but who are carried away solely by an enthusiasm for the moral regeneration which is to follow their reforms. To what an extent this has been carried on in this country is shown by the legislative struggle now going on in Congress to prohibit a physician from prescribing a bottle of ale or beer for the sick or aged. No wonder suicides are increasing here as they are nowhere else unafflicted with this form of legislation."

SOME PROHIBITION PROPAGANDA 67

Probably the most one-sided of all Dr. Fisk's prohibition "arguments" is his distortion of the reports of investigators as to the effect of alcohol on human efficiency. He has devoted considerable space to tests made in the Nutrition Laboratory at Boston and to the experiments of German scientists, all of which tend to show a lowered efficiency in the worker when alcohol is taken even in small doses. The following is a typical quotation :

"Aschaffenberg found that moderate doses of alcohol lowered the amount of work done by printing compositors and increased the liability to error."

Now let us look at the other side of the story. A piece of machinery can be kept in operation for a long time without rest or repair, but eventually it must be stopped and overhauled or it will go to pieces. The human machine can operate for a short time only without rest or relaxation. But when the body has become relaxed, from whatever cause, its productive efficiency is temporarily impaired, of course. Yet such relaxation, whether it begins with the nervous system under the influence of alcohol, or in some other way, is a necessary preliminary to renewed efficiency. When the system is strained by too great effort, alcohol helps materially to induce relaxation. The highest form of relaxation is sleep.

68 *THE EIGHTEENTH AMENDMENT*

If these laboratory tests had been made while the subject was under the influence of sleep they would have been considered a joke. They are no less a joke from the scientific standpoint because they have been made to seem specious to those unfamiliar with simple logical principles.

The impression we get from all this is that the author depended for the success of his "arguments" on the ignorance of his readers. It is by arguments such as these that the dry party has attempted to make prohibition appear attractive or at least reasonable to the public. The other side of the question has never been presented. Let us therefore review the life insurance companies' case against alcohol and see what they have found it expedient to leave unsaid.

CHAPTER XI

ALCOHOL AND LONGEVITY

The interests of a nation and an individual citizen, or group of citizens, are not always identical. Longevity is distinctly a case in point. It may be expedient for the welfare of a nation, or even absolutely necessary for its continued existence, that the lives of some of its citizens be sacrificed. Many of our countrymen voluntarily offered their lives for the national cause in the Great War. If they carried a life insurance company's policy, they had to pay an extra premium for the privilege of being patriotic. This may have been merely fair to the other policy holders, but it was not in accordance with the welfare of the nation as a whole. Such conflicts of interests will be found in the pursuits of peace as well as in the exigencies of war.

We have only to study the personal history of some of our industrial leaders to see the fallacy of applying the insurance companies' theories on longevity to our national life. There are many men, well known in our banking and commercial circles, who can still look back and recall with affection one

of the principal figures of their early business experience. They see a little man seated at a table before a soft coal fire in a sunny room in the financial district, a sandwich in one hand, a pencil in the other, working out some problem which could not be delayed for culinary comforts. Trained from boyhood in the school of our great merchants in the days when the clipper ships still thrust their bowsprits across the streets on the river front, before the telephone and the typewriter had simplified business correspondence, when night work was often the rule rather than the exception, he had acquired habits of industry which he was never willing to forsake, even under the pressure of failing health. If work was to be done, it mattered little when it was completed, and he often worked until midnight. It is industry such as this that wins success. He was one of our dominant constructive men.

He built up America's leading company in a basic industry. He endowed colleges, founded churches and educational institutions. If a friend needed assistance, he was always ready to leave his own multitudinous affairs and give sage counsel or material help. Yet, from the insurance companies' standpoint, his life was a failure because he literally wore out his body before its allotted time. Which, think you, is the better citizen or of more value to the nation, a man such as this, or the man who lives

his eighty or ninety years in comparative idleness and dies in the poorhouse?

There are occasions, after great physical or mental effort, when the body calls for alcohol. Perhaps if we could rest, "lay off" for a day or two as advised by the physicians of health, spend the time in bed if need be, the body would make its own repairs and we should be the better for it. But this is not always possible in our business life. A man may not be able to leave his affairs in charge of his clerks. A banker or a broker on the floor of the Exchange would laugh at the idea of deserting his partners in time of emergency because his nervous system was overstrained. Instead, he was accustomed to steady his nerves with a cocktail, "take a bracer" as he called it, and thus stimulate digestion for his evening meal, so that he would be able to sleep at night and "go at it again" the next day. Alcohol has been likened in such cases to the whip which kills a tired horse. It is not the whip that kills, but the pace. And so, if we could analyze the life insurance statistics, we should find in many instances that it was not the alcohol which shortened life, but the over-exertion which it makes possible. This may be an abuse of alcohol, but it is not the abuse of the temperance lecturer. The question arises, Has the individual a right to use his own judgment in these matters? He

may make mistakes, of course. On the other hand, he may not.

Nature's ways are not the ways of civilization. When she made alcohol it was perhaps without prevision of the manifold changes which civilization would effect in our mode of life. Alcohol may not invariably fit these changes, but that is surely no reason for depriving mankind of a vital gift.

We can sometimes get a clearer view of a subject if we look at it from a new angle. I have spent many a pleasant hour wandering over the hills of New England. Recently, on the crest of a heavily wooded hillside, I found the mark of the last furrow turned by a plow on what had once been cultivated land, in the days before the youth of New England set out to find their fortunes in the prairie states of the Middle West. New England is full of abandoned farms. It is an interesting study to see how nature reclaims the worn-out pastures and restores to its virgin fertility the soil which man has robbed of its plant food until it will no longer bear a profitable crop. First, a carpet of weeds and rough grasses is spread upon the land, then come the briars and bushes, the sumacs, and the weeds of the forest, the white birch. Every leaf that falls, every root that dies, is adding its mite of plant food to the renewed fertility of the mold. And now the young forest trees spring up where the soil is strong enough

to bear them, growing with ever increasing vigor and crowding off their weaker neighbors until a forest again covers the hillside. Autumn after autumn they cast their leaves upon the ground, to be packed down by the snows of winter and rot when summer returns. Nature's process is perfect, but it may take a hundred years. It is too slow for the husbandman. He employs the methods of civilization. He stimulates the soil's flagging powers with a fertilizer and, if his crops take more out of the soil than he is able to return, he will tell you that it is his land and he has the right to do with it as he pleases. No one would think of blaming him for overworking his land to prevent the foreclosure of a mortgage and thus save the roof over his family's head. Yet Dr. Fisk's theories condemn the business man who overworks his body for the sake of his pressing interests. Shall we hold up to scorn such a man, who chooses to crowd the work of two lifetimes into the productive years of his prime? The question is as old as Cicero's "De Senectute": shall we measure life by the calendar or by its accomplishments?

After all, the body is but a human machine which will wear out from too much service, like those made of steel and brass, or which will rust and deteriorate from neglect and imperfect use. No doubt it might be better for the average citizen to seek a happy

mean of safe and not exhausting effort. But man cannot always find the good that he desires, or desire the good that he may find. It is often necessary for him to effect a compromise between his own tendencies and the complex requirements of civilization. If alcohol helps him to do this, should he be deprived of a boon which nature herself has furnished ?

CHAPTER XII

MORE FALLACIOUS PROPAGANDA

The life insurance companies' statistics feature the "Occupational Hazards from Alcohol." "Not the least important feature," says Dr. Fisk,* "of the investigation conducted by the forty-two companies was the mortality figures in occupations where alcohol figured as a hazard."

These figures were as follows:

HOTELS

	Death-rate above the normal.
Proprietors, superintendents and managers not tending bar	35 per cent.
Proprietors, superintendents and managers tending bar	78 per cent.

SALOONS AND BILLIARD-ROOMS, POOL-ROOMS AND BOWLING-ALLEYS WITH BAR

Proprietors and managers not tending bar	82 per cent.
Proprietors and managers tending bar	73 per cent.

* "Alcohol—Its Relation to Human Efficiency and Longevity"; pp. 31-34.

76 THE EIGHTEENTH AMENDMENT

BREWERIES

Proprietors, managers and superintendents	35 per cent.
Clerks	30 per cent.
Foremen, maltsters, beer-pump repairmen and journeymen	52 per cent.

DISTILLERIES

Proprietors, managers and superintendents	<i>below normal</i>	15 per cent.
Travelling salesmen and collectors for distilleries, breweries and wholesale liquor houses (excluding lifelong total abstainers)	<i>above normal</i>	28 per cent.

WHOLESALE LIQUOR HOUSES

Proprietors and managers	22 per cent.
Clerks	12 per cent.

RESTAURANTS WITH BAR

Proprietors, superintendents and managers not tending bar	52 per cent.
Waiters in hotels, restaurants and clubs where liquor is served	77 per cent.

"These figures indicate," Dr. Fisk says, "that saloon-keepers have a death-rate higher than that of underground mine foremen; that brewery foremen, maltsters, and the like, have a death-rate higher than electric linemen, glass-workers, city firemen (laddermen, pipemen, hosemen), metal grinders or hot-iron workers, although there is nothing in the

brewery or saloon business *per se* that is at all hazardous or unhealthful, aside from the possible temptation to drink and its collateral hazards. Proprietors of distilleries are obviously not so directly exposed to temptation or to other adverse influences that obtain in the retail liquor trade; this accounts for the favorable mortality."

The further we follow these life insurance statistics, the more we are apt to wonder whether any real attempt has been made to analyze them. Certainly the interpretation which is here given to them is not in accordance with scientific facts. There is no mystery about the cause of premature old age, with all its infirmities and early death. Metchnikoff's work in this particular field of research is well known. Unquestionably his greatest contribution to medical science was his discovery of the function of the white corpuscles of the blood. But his popular fame will always rest upon his theories for the prolongation of human life.

It is nature's familiar law that all flesh returns to the soil from which it came. Nature's agents of disintegration are the putrefying bacteria which cause flesh to decay. The activities of these bacteria are not confined to the dead animal body. The minute organisms are in the air and are taken into the system with our food. Under favorable conditions (for the bacteria) the intestines become infested,

78 *THE EIGHTEENTH AMENDMENT*

with the result that there is putrefactive fermentation of the animal and vegetable substances in process of digestion. Thus toxins are formed which are absorbed by the blood, causing a slow, insidious poisoning of the vital organs and the entire system, until finally the body is forced to give up the struggle long before its allotted time. Metchnikoff proved that the presence or absence of putrefaction in the large intestine is the chief factor that affects the duration of life. Over ninety per cent. of all human ailments are directly or indirectly traceable to these intestinal poisons, or, as the condition is commonly called, auto-intoxication.

Alcohol is contra-fermentative. Vegetable and animal products are often preserved in alcoholic liquors. Therefore, even if it does not actually correct the fermentation, it could in no way add to the putrefaction in the digestive tract. It is quite evident that if we have an increased death-rate among the proprietors of saloons of 82 per cent., due to alcohol, we cannot in addition attribute 90 per cent.—the established quota—to auto-intoxication. A very simple arithmetical calculation will demonstrate that the death-rate would be 72 per cent. above the possible. The reader must, therefore, choose between the theories of Dr. Fisk and those of Professor Metchnikoff.

A closer inspection of the figures will throw fur-

ther light on the subject. In nearly all the situations in which the highest death-rate occurs, we find that the occupant is deprived of proper exercise. While everybody is subject to auto-intoxication, it is far more prevalent amongst those who lead a sedentary life. Nature's corrective for this condition is exercise. By invigorating the intestinal tract, this induces a more perfect evacuation of the waste matter, and the toxemia is carried off through the pores of the skin in perspiration. Exercise in which the abdominal muscles are brought into play is the most effective.

In the saloon or hotel barroom the hours were long. In many of our cities it was found expedient to regulate the hours for closing. The larger barrooms employed two staffs to handle the night and day business. But in a large number of the smaller places this could not be afforded; consequently the proprietors, managers and bartenders remained at their desks or behind the bar for long hours at a time. I venture to believe that, if the truth were known, the death-rate among bartenders was no higher than among shop-girls spending the same amount of time day in and day out, year in and year out, behind the ribbon counter.

We also find a much higher mortality among proprietors and employees of breweries than among the same class of individuals connected with distilleries.

The death-rate among proprietors, managers and superintendents of distilleries is even fifteen per cent. below normal. Malt liquor contains from three to seven per cent. alcohol, distilled liquor about fifty per cent. But beers also contain nitrogenous nutrients subject to fermentation, and the alcoholic content is too low to have any appreciable deterrent effect. No less an authority than Dr. Abraham Jacobi maintained that alcohol is an intestinal antiseptic. If this is true, the higher the alcoholic content the greater the protection against fermentation and consequent self-poisoning. Of course, when Dr. Fisk says "Proprietors of distilleries are obviously not so directly exposed to temptation," he is simply guessing. If I also should hazard a guess, I should say that the manufacture of whisky was lucrative, and the distillery-proprietor could afford to take, and did take, sufficient time away from his business to ride, shoot, play golf, etc., and so keep his body in better physical condition.

It is easy to prove almost any proposition by figures, if one is careful to select only statistics which support the contention. What is the effect of alcohol on those who lead an active life? Here are some data obtained by Dr. Charles E. Woodruff, surgeon with the rank of major in the United States Army, from the observation of about twenty-eight hundred United States infantry and cavalry on active duty in

the Philippines in the early days of the American occupation.

"Approximately 11 per cent. of the abstainers died, while about $3\frac{1}{2}$ per cent. of the moderate and less than 2 per cent. of the excessive drinkers died. About 15 per cent. of abstainers were invalided home, about 9 or 10 per cent. of the moderate and about 8 per cent. of the excessive drinkers. About 26 per cent. of abstainers, 24 per cent. of moderate and 24 per cent. of excessive drinkers deteriorated in health. About 49 per cent. of abstainers, 64 per cent. of moderate and 66 per cent. of excessive drinkers retained their health. There were very few who improved in health in any class, but the percentage among the abstainers was a trifle higher than among the excessive and less than among the moderate drinkers." *

On his return from the islands, Dr. Woodruff published his conclusions in the *New York Medical Record* of December 17, 1904, from which the following is taken:

"In 1902 I obtained a mass of data as to the physical condition and drinking habits of a regiment of infantry which had been about three

* "Medical Ethnology"; Woodruff, p. 149.

82 *THE EIGHTEENTH AMENDMENT*

years in the Philippines, to which was added about two troops of cavalry of about fifteen months' service. Each company commander divided his men into four classes as to health: 1. those who retained health; 2. those who deteriorated in health; 3. those who were invalided home for disease, and 4. those who died of disease. The drinking habits of each man were also given, as 1. total abstainers; 2. moderate drinker, who was never drunk; 3. excessive drinker, who was occasionally or periodically intoxicated. I know the figures to be as near the truth as it is possible to make them, because officers gave me the data, and their minor personal equations were neutralized.

"I must confess to being somewhat disconcerted and disheartened at first by the totals; the excessive drinkers were far healthier than the abstainers, only one-half as many were sent home sick, and only one-sixth as many of them died. I had hoped to prove the opposite. . . . The damage done to these young men by occasional sprees is not so great as the damage done by the climate to abstainers. What a lot of misstatements have we received from our teachers, text-books and authorities!

"I suppose some medical editors would advise hiding these figures on the ground that they would be an advantage to the whisky dealers who buy

Kansas corn from prohibition farmers. They would no doubt rather see our soldiers die than let them know that a drink of wine at meals might save their lives." (Truly a prophecy of what was to occur later in the Army camps and in the United States Navy during the Great War.) "Think of the statement that 'the claim that the use of alcohol is desirable in the tropics is refuted beyond the possibility of discussion,' (*Boston Medical and Surgical Journal*, June 21, 1900), a statement for which there is no basis in fact. There are no figures, statistics or trustworthy data in existence upon which such a statement could be based.

"This attitude in defence of current opinion is dangerously near to the old one, which we hoped had disappeared from New England forever; we can almost hear the echo of that short dark period when its people said, 'The claim that there are no witches is refuted beyond the possibility of discussion.' "

That is a valuable contribution to the subject, by a man clearly more interested in the truth and bearing of his facts than in clinging to preconceptions which his own experience has proved to be mistaken.

CHAPTER XIII

THE LABORATORY VS. NATURE

There are many things which we have learned to use and enjoy in moderation, such as alcohol and other foods and beverages, fire and ice, steam, electricity and various familiar agencies, which may become sources of danger if allowed to get beyond control. Moderation is of course one of the cardinal rules of our existence. Too much of a good thing is often more harmful than a little of what is really bad. The immoderate use of alcohol is clearly detrimental not only to the individual, but also to society. In well-governed communities drunkenness, like other excesses, is taken care of in the police courts or hospitals. It was necessary for the prohibitionist to prove that even the moderate use of alcohol was harmful, lest, with the proper enforcement of existing laws, he should find himself in the position of Don Quixote, tilting at his windmills.

In recent years much thought and study have been given to the nourishment of the body. Many foods, and alcohol among them, have been the subjects of careful laboratory examination and experimentation. The prohibitionists have made good use of the un-

favorable side of these experiments to further their propaganda. In this way they have endeavored to show that alcohol is not a stimulant, but, on the contrary, a narcotic, a depressant; that it has no food or medical value, but is a toxic substance and definitely injurious, even when used in moderation.

The following comments by Professor W. S. Hall will serve as an example of the methods adopted.

“THE ENERGY FROM ALCOHOL NOT AVAILABLE.—Is the energy liberated in the oxidation of alcohol in the liver available for the use of muscles, nervous system or glands? If this question is answered affirmatively, then alcohol is a food. If negatively, then alcohol is not a food.

“All body oxidation may be classified in two groups: 1. *Active Oxidations*, which take place in the active tissues, muscles, nervous system or glands,—and take place incident to action. Active oxidations are under perfect control of the nervous system and are proportional to normal activity. 2. *Protective Oxidations*, which take place in the liver. This class of oxidation-process is wholly independent of the usual tissue activity, and is proportional to the ingestion of toxic substances and independent of muscular action, brain action or gland action (other than liver action).

"If the oxidation of alcohol in the liver belongs to Class 1, the following consequences should be found: First, the ingestion of alcohol would lead to an increased muscular power and an increased capacity for brain work, and increased glandular activity. Second, the ingestion of alcohol would serve to maintain body temperature in the healthy individual subjected to low external temperature. Third, the increase of muscle, brain or gland activity would be proportional to the amount of alcohol ingested. Now laboratory observations and general experience show that none of these things is true: that is, the ingestion of alcohol decreases muscle, brain and gland work and depresses body temperature when external temperature is low. The oxidation does not therefore belong to Class 1.

"If the oxidation of alcohol in the liver belongs to Class 2, the following consequences would be found: First, the ingestion of alcohol would be followed by its early oxidation in the organ in question. Second, if the oxidation capacity of the liver is limited this capacity may be overloaded by exceeding the physiological limit of alcohol. Third, if the oxidation capacity of the liver is taxed nearly to its limit, by the oxidation of the uric acid xanthins and other toxic substances, the ingestion of alcohol may seriously interfere with

this protective oxidation by overtaxing the capacity. Fourth, if the oxidation capacity is overtaxed, an excess of uric acid, xanthin bodies, and other toxic substances will get by this portal and reach the active tissues of the kidneys. Now all of these things take place, so we are forced to the conclusion that *the oxidation of alcohol is a protective oxidation.*

"Alcohol is, therefore, a toxic substance and not a food in any sense."

Propaganda such as this carries weight with the layman. He has no means of determining the truth or falsity of the conclusions. It "listens well," as they say. Like the child's decalcomania, it brings out a picture where before there was only a blank, and if in the picture we find a purple cow or a green cat, his untutored mind is unable to detect the error.

The thought which the prohibitionists intend to convey is that alcohol being a poison is not fit for human consumption. Salt also is a poison. Salt poisoning is quite common among our domestic animals, yet salt is a necessary part of our diet. The first question which naturally suggests itself is, if alcohol is a poison, why is it produced in the body?

It must be remembered that physiological chemistry is still in swaddling clothes. Our knowledge of the body's processes is very limited and many seem-

ing contradictions occur. Take, for instance, the problem of the gastric juice.

The body digests its food by the aid of certain juices in the digestive organs. These juices are powerful enough to break down the tissue of any flesh with which they may come in contact. Why, then, are they not dangerous to the body itself? Some animals devour their own species. A pack of hungry wolves has been known to fall upon a wounded comrade and completely devour it, including its digestive apparatus. If the gastric juice is strong enough to break down tissue of the digestive organs of another creature, why does it not have the same effect upon the stomach that produces it? Why does not the body digest itself? The problem may seem quite formidable until we consider the great resistance of the living cell. It is this resistance which withstands the action of the gastric juice, as it withstands the toxic effect of salt and alcohol when properly used.*

* To illustrate the great vitality of the living cell, it may be noted that laboratory investigations have provided a method of showing that the life of the tissues may be preserved even after these have been removed from the body. Dr. Carrel has demonstrated (*Journal of Experimental Medicine*, May 1, 1912) that by washing cultures of connective tissue in Ringer's solution and then placing them in a new medium the growth was accelerated, senility prevented and the duration of life greatly prolonged. Some of the

The best evidence that alcohol is necessary to the human economy is the fact that the body obtains a supply through the alcoholic fermentation of sugar and other carbohydrates, which takes place in the intestines. The digestive process separates the fit from the unfit. Alcoholic fermentation is a purifying process. It eliminates much that is harmful in the natural fruit juices. A pure light wine is a healthier beverage than unfermented grape juice, sweet cider or the fruit juices of the soda water fountain. Many of the arguments which the prohibitionists use so freely against alcoholic beverages could be applied with greater consistency against the so-called temperance drinks. Anyone who has watched alcoholic fermentation in light wines or beer will probably agree that it were better to have this take place outside the body instead of in the vital organs.

Let us look on the subject from nature's standpoint. The most primitive forms of alcoholic beverages are the wines pressed from grapes, apples and other fruits. In our forefathers' time, and until labor-saving devices in manufacture and transportation had commercialized wine-making, these wines were produced in the homes throughout America.

cultures were living at the beginning of the third month of their life *in vitro*. (See "The Immortality of the Cells and Tissues": *Medical Record*, May 11, 1912.)

The harvest feast of Thanksgiving found the housewife bringing to the table her cider, or currant, blackberry and grape wines, along with the turkey, the mince pies and other evidences of her culinary skill. Cider-making is still familiar enough to most of us, so that we may observe nature's guiding hand in the process and see how she has planned for our welfare.

Cider is made from the juice of the ripe apple. The same juice is obtained when the apple is eaten, but the fruit contains a lot of bulky roughage which, by filling the stomach, limits the amount of fresh juice that can be absorbed in this way. At harvest time, when the juice is first pressed, the cider is sweet. But here again nature steps in to prevent over-indulgence, for the juice remains in this condition only until fermentation, which begins immediately, has done its work. Man has been able to kill the germs of ferment by heating or by the introduction of benzoate of soda or other chemicals, and thus preserve the juice in its unfermented form throughout the year. But that this was contrary to nature's purpose is clearly discernible if we follow the process of wine-making.

Let us suppose the juice has been pressed and carefully strained and that we have a clear sweet cider (or grape must). This is placed in a barrel. In from twenty-four to twenty-eight hours it will

commence to work and a frothy mucilaginous scum will rise in a sticky mass through the bunghole. This frothy scum will be filled with yeast and parenchyma and other impurities. This is the first effect of fermentation and is called by the wine-makers "purging." It is followed immediately by a less tumultuous, effervescent fermentation with a rise in temperature, which continues until all the saccharines have been turned into alcohol.

We have an ocular demonstration of nature's efforts to purify her beverage in the column of froth which rises through the bunghole. When fermentation is completed, what has been accomplished is apparent not only to the eyes but to the palate also. The reader has doubtless often noticed the dregs at the bottom of a bottle of wine or ale. The small percentage of impurities to be found in a bottle of wine which has been carefully drawn off from the cask to avoid disturbing the liquid, is as nothing compared to the murky mass of lees deposited at the bottom of the barrel in the process of fermentation. And these are in addition to the impurities which are purged through the bunghole. If the lees are disturbed the wine becomes cloudy and bitter, and to drink it would bring on intestinal disturbances which would soon convince the experimenter that the whole juice of the fruit was only intended by nature to be partaken of at harvest time. In guarding against

92 *THE EIGHTEENTH AMENDMENT*

over-indulgence in the fruit juices, nature has completed her work by providing the matured wine with alcohol, which, by causing intoxication, raises the danger signal for those who would imbibe too freely.

Let us hear what one of our dietitians has to say on the subject:

“Alcohol is made through fermentation and distillation, and both these processes would be impossible without sugar. When we understand this, we find that we can make alcohol by simply eating sugar, because this alkaline substance coming in contact with the hydrochloric acid of our stomach, ferments quickly and causes as much stimulation to our nerves as though we partook of the prefermented article in the shape of light beers or wines.

“Everybody is familiar nowadays with the usage of giving sugar to soldiers before they go into battle, or of giving sugar to athletes. But how few people know that this article of food is given to these people because it creates an alcohol which is taken up by the nervous system more quickly than the prefermented alcohol in the shape of wine or beer! A good pair of kidneys eliminates the prefermented article very quickly, not so the fermenting one.

“A simple knowledge of how wine is made

will explain this question to the reader more fully. Wine is made by crushing fruit, vegetables or grains, and allowing the natural sugar of these foods to ferment. In order to hasten the process we add cane sugar and water, and let this stand in a warm place until fermentation has brought to the surface all waste products, leaving a clear, watery fluid, according to the ingredients of which it is made.

“The alcohol made in this manner is concentrated before it even enters the stomach, and through its very density is eliminated much more quickly than when we depend on the stomach itself to perform the process of fermentation. The teetotaler, without realizing it, creates his stimulant. Lacking the immediate pleasing effect of alcoholics, he generally turns into a dyspeptic grouch—much more objectionable than his friend who, admitting he wants a stimulant, partakes of a glass of beer or light wine, and thereby draws his nervous energy to his stomach. This friend might be accused of a little undue conviviality, but certainly he becomes more human than his grouchy sick friend.

“It must be understood that I am not advocating the use of alcohol, but wish rather to explode the mistaken notion that alcoholics are the only stimulants. Harm comes from partaking of al-

cohol in moderation only when the function of the kidneys is impaired, and all liquor should be excluded from the dietary in such cases. But how much more should sugar be excluded!

"Sugar is present in all fruits, vegetables and grains, and such sugar of course should be used. But the concentrated sweetness of sugar cane, figs, dates and bananas should be used only in moderation because, next to the oxygen we breathe, sugar is the strongest stimulant there is.

"Next to sugar, alcohol is strongest in brandy and whisky, and these strong liquors should also be avoided, leaving for consideration the light wines and beer. The latter is a liquor originally brewed in Germany, and the English people, brewing it in a slightly different manner, manufacture ale and porter instead. The foundations of these drinks are hops and malt. The latter is a product made by steeping, drying and concentrating grain, which may be either peas, beans or wheat.

"The water in beer is distilled, and the percentage of alcohol is so small that it cannot be objected to by anyone who thoroughly understands the manufacture of it. Every human being has his idiosyncrasies, and there are people whose kidneys are not normal, to whom beer might be harmful, but to such people meat and sugar are

even more harmful, and the discredit should not all be given to beer.

"The average teetotaller clothes himself with the 'mantle of righteousness' because he doesn't drink alcoholic stimulants. Then he turns into the next drug store to have some soft drink or candies, by which he injures himself tenfold as much as by drinking any of the light liquors.

"Most soft drinks are flavored with syrups, and I have already shown how we manufacture alcohol in our stomachs when we eat sweets. All sweets turn into an acid, causing fermentation. They set up diseases more quickly than if we were to partake of the already manufactured alcoholic beverages such as light beer and wine." *

That alcohol in some form is necessary to the human system cannot be doubted. There is one way and one way only by which prohibition could be accomplished, and that is by tearing down and rebuilding the human machine. If, as science has been able to demonstrate, this machine has been evolved through countless steps of evolution from a lower stratum of animal life, it might be possible through other countless steps so to change it that alcohol would no longer be essential for its proper functioning. That this is not beyond the bounds of plausi-

* "Triangle of Health"; Arnold, p. 129.

96 *THE EIGHTEENTH AMENDMENT*

bility, we have as evidence the other earthly creatures which apparently exist in health and vigor with little dependence on this gift of nature. The lower we descend in the scale of animal life, the less requirement there is for alcohol. The fish, the frog, the lizard, the snake and other cold-blooded creatures are familiar examples. Yet it may be that alcohol, like oxygen, is one of the immutable essentials for the animal kingdom. At any rate, no animal capable of free locomotion can dispense with it altogether. They may use very little, but some they must have. Possibly the oyster and clam are complete abstainers and represent the ideals of prohibition at their highest point. Yet their existence scarcely commends itself as a goal for human aspiration. Whatever evolution brought us from, we have the habit of preferring to go forward rather than back. We are content to follow the purposes of Providence so far as we can glimpse them. And though there are doubtless some zealous reformers who believe that if they had the directing of the universe they could produce a better race and a better world, most of us are willing to take creation as we find it.

CHAPTER XIV

THE FOOD VALUE OF ALCOHOL

The food and medical values of alcohol have a very close relation to each other. Proper nourishment is the foundation of health. The body, by its own efforts, is able to overcome disease in most instances, if it can obtain and assimilate its natural food.

What is food? Stedman's *Medical Dictionary* gives: "FOOD. Anglo-Saxon *Foda*, aliment, nourishment, what is eaten to supply the necessary nutritive elements.—NUTRITIVE. NUTRITION. Latin *Nutrire*, to nourish. A function of living plants and animals consisting in the taking in and assimilation through chemical changes (metabolism) of material whereby tissue is built up and energy liberated; its successive stages are known as digestion, absorption, assimilation, and excretion; in highly organized animals digestion is preceded by mastication and deglutition, and excretion is effected by expiration, perspiration, urination and defecation." These functions are carried on by the various organs of the body, under the control of the nervous system, of which the brain is the head.

Foods may be divided into two classes: those which primarily produce tissue and energy, and those which enable the organs to function. This is a simple rather than a strictly scientific way of putting the matter, because all foods serve both purposes. But the foods in the first class go more directly into the production of tissue and energy, while those in the second class work, in a measure, indirectly. For example: Digestion is under the control of the gastric nerves. Food, producing tissue and energy, also creates nerve force—nerve force makes possible digestion, assimilation and elimination. Foods like alcohol, by their effect on the nervous system, aid assimilation and are therefore indirectly assisting in building tissue and energy. The human body is often likened to an engine. To carry the simile further, the foods of the first class may be regarded as the gas or steam which produces the driving force, while the foods of the second class are the oils which effect the lubrication. Of these, alcohol is the most important. To deprive the body of its necessary amount of alcohol will have the immediate effect of lowering its energy-producing power. Some systems require more alcohol than others, and to attempt the artificial regulation of this necessity because it sometimes produces intoxication, is about as sensible as to ask the motorist to give up the use of lubricating oil because it occasionally works into the cylinders.

In infancy the body obtains its supply of alcohol from milk sugar. The new-born babe begins acquiring the alcohol habit with the first drop of milk it takes from its mother's breast—the habit of manufacturing alcohol for its body's needs. As the child develops, more alcohol is required, and a taste for sweets and candies develops. The need for alcohol is never more plainly demonstrated than at this stage of our existence. The healthy, romping child eats, with the greatest eagerness, all kinds of cakes, candies, ice cream and other sweets. The result is an exuberance of high spirits and muscular activity, while the child with a weak digestion, who must of necessity control his desire for sweets, is sickly and unable to play and romp like other children.

During the early years of childhood the body, except under abnormal conditions, obtains all the alcohol it requires from the sugars and starches of its daily diet. If we could go through life as children, playing and exercising without restraint, and without the strain of labor and responsibility, it would be unnecessary to add to our alcohol supply by other means, except when disease or some unusual occurrence made it advisable. But with the approach of manhood, with its duties and ambitions, comes an increased demand on the body, and the alcohol supply must be increased.

This demand, however, does not come to all alike.

A Samson or a Sandow can lift a hundredweight with less exertion than the man whose muscles are undeveloped. In the same way the brilliant mind can do its thinking with less effort, or less friction, than one more sluggish; and while the latter in the end may perhaps accomplish just as much, it is at the expense of greater labor and a greater tax on the system. Mental effort uses up more nervous energy than physical labor. The man who sits at a desk all the time is often more tired at the end of the day's work than the laborer in the fields. There is thus a wide variation in the food requirements of different individuals, in accordance with physical and mental development, occupation and mode of life. Any attempt to standardize the daily diet will inevitably work injustice and will result in many cases of malnutrition and the consequent breeding of disease. Enforced rationing is dangerous at its best because of its effect on the nerves. Let us follow the working of the nerves in the digestive process and see why alcohol may be necessary for their proper functioning.

The body selects its food by the senses, and their messages are transmitted to the brain by the nerves. The sight of the bright red apple, the smell of the savory dish of bacon, the sweetness of the lump of sugar, are all conveyed to the brain over the nerve telegraphs. The gustatory and olfactory nerves,

responsible for taste and smell, and the gastric nerves, which regulate digestion, are integral parts of one system and may be equally affected by outside influences. The odors coming through the open door of a bakery or cook shop will stimulate the appetite or add to the pangs of hunger. The sight of blood may have a directly opposite effect. The taste of a bad oyster will produce nausea long before any toxic action can occur.

The body adjusts itself to changes of conditions, but this adjustment does not take place so rapidly as in self-regulating man-made machines. For instance, to give a concrete case: If a man ordinarily engaged in office work should spend a day behind the plow or in some other strenuous exercise, he will burn up more tissue than his body has been accustomed to restore at short notice. The consequence will be that for three or four days following he will be unusually hungry before every meal, and even though he eat more food, as he almost certainly will, it will not alter the result.

The body is constantly meeting abnormal conditions. Disease, fatigue, worry, fear, all have their influence on our nervous system, including the gastric nerves. We often hear the expression "too tired to eat." The craving felt for alcohol under such circumstances is only nature calling for a food which the body must have before it can return to

“normalcy.” This need may show itself in a desire for sweets from which the body can make its own alcohol, or in the craving for a drink, according to the habits of the individual. Manufactured alcohol is preferable because it is more easily assimilated. To attempt to obtain alcohol from sugar or starches, when the digestive apparatus is worn with fatigue, is to invite chronic dyspepsia.

The reason for the body's craving for alcohol under these conditions now seems clear. It has been recently demonstrated that alcohol acts as an antidote to the effect of disease toxins on the nervous system, even in the case of some toxins which cause permanent impairment. If alcohol will thus counteract the more serious toxins of disease, it seems only reasonable to suppose that it will have the same effect in the case of fatigue toxins. Much evidence has already been produced to support this conclusion, which fits in so perfectly with the known facts about alcohol that there can be little doubt about its correctness. This, then, is the logical explanation of the stimulating effect of alcohol, in itself a depressant.

There is another side to the question of the food value of alcohol, which is generally ignored in the arguments of the prohibitionists. Alcoholic beverages, particularly the malt liquors, contain other nutrients which, in combination with alcohol, form

an easily digested and highly beneficial diet. We do not make three square meals a day from salt alone nor do we drink pure alcohol. Many of the arguments against alcoholic liquors can certainly be modified to take into account the additional nutrients which these beverages contain.

CHAPTER XV

ALCOHOL AS A MEDICINE

There is no drug in the whole pharmacopœia which has been more generally employed or has had a wider field of usefulness than alcohol. Its medicinal value was recognized by Biblical and other early writers :

“Give strong drink unto him that is ready to perish,
And wine unto those that be of heavy hearts.”

PROVERBS xxxi: 6.

Its use as a therapeutic agent goes back indeed to prehistoric times, where, naturally, we cannot now follow it. But it seems more than probable that alcohol originally taught mankind the value of drugs in the treatment of disease. We can easily conceive the feeling with which sickness was regarded by primitive man, as a visitation beyond control. The sense of warmth and well-being which alcohol produces may certainly have led our interesting ancestors to make their first attempts at medical treatment.

To-day, alcohol is as highly regarded for its medicinal qualities, except by a portion of one medical cult, as it ever was. Yet it has been placed by stringent legislation quite beyond the reach of the

ordinary individual, unless he is prepared to break the law. The first law of nature is self-preservation, which is usually considered higher than man-made laws, even though these are the laws of our own country. If alcohol is necessary to maintain life, no statutes, and no methods of enforcement, will ever be able to prevent its use.

A little knowledge is proverbially a dangerous thing. It is the hasty, superficial half-knowledge of the laboratory that has condemned alcohol. Fortunately, we do not live in the laboratory; and the theories that are born there are of little value unless they can be applied to the betterment of our daily life. Before this can be done, we must have a fuller, clearer knowledge of the human body. What we think we know has only led to confusion. Thus we find alcohol is a depressant, yet it stimulates. It is a nerve sedative, yet it produces nerve force. It retards the action of the digestive ferments, yet it aids digestion. It is no tissue builder, yet it adds to the body's weight. It lowers the body's temperature, yet it warms the body. It dulls men's wits, yet it increases the activity of thought and speech. It induces sleep, yet it will keep the faculties awake. It may lower the capacity of the individual worker, yet it increases labor's output. Itself a poison, it protects against more serious poisons. There is probably no drug more complex in its physiological

action than alcohol. On account of its great power for good and evil, it may well be considered the Jekyll and Hyde of the pharmacopœia. Hare sums up the pros and cons as follows:

“Clinical experience, too great to be ignored, stands for the continued employment of the drug. The drug does not act as a stimulant in the ordinary sense of the term, but nevertheless readjusts the circulation by dilating the peripheral vessels and influences the protective powers of the body by affecting the blood-cells or the blood-serum or the lymph. This belief seems to find support by reason of experiments carried out by the author, in which he was able to show that alcohol *produces a distinct increase in the bacteriolytic power of the blood in disease*, probably by increasing the activity of the complemental body.”*

Like many of the things which nature has produced, alcohol will lose its power for harm as soon as we are able to dispel the ignorance which still surrounds it. Much has already been accomplished, and now that prohibition has become a national issue the work will unquestionably be completed. So there will be at any rate one good result of the

* “Practical Therapeutics”; Seventeenth Edition, p. 76.

attempt at prohibition: we shall have a better knowledge of alcohol.

The science of medicine is passing through a transition period. The old theory of symptomatic treatment is being abandoned. The physician of to-day no longer treats the symptom where it is possible to strike at the cause. Alcohol may or may not be a heart stimulant. It may equalize circulation. It may have the property of sparing tissue. But all these are of secondary importance. To pass the test of modern medicine we must be able to show that alcohol will assist the body to remove the cause of disease. This has now been definitely established, with the result that the whole structure of the prohibitionist's arguments against the use of alcohol in medicine has fallen like a house of cards.

Our knowledge of disease, and by this is meant infectious disease, has been brought to a point where we are able to classify and distinguish between the various forms of germ life in much the same way as we classify the different forms of terrestrial life. Just as we divide the latter into beasts, birds and fishes, so the former are classified as necroparasites, semiparasites, true parasites and tissue parasites. Of these, the first two produce toxins. The necroparasites possess a low grade of infectiousness, that is, of the power to multiply and spread through the body, but they cause death by their highly fatal

poisons. The germs may be unable to maintain themselves in normal tissue, but their toxins are powerful enough to kill, even after the germs themselves have ceased to exist. On the other hand, the semiparasites are highly infectious and aggressive and multiply rapidly in the system. Their poisons are less deadly, but continued production of the toxins may prove fatal. These are the germs with which we have to deal in influenza and many of our serious diseases.

With the production of a practical germicide, it is now possible to stamp out these infectious semiparasites at any period of the disease, unless, of course, the case has gone altogether too far for curative treatment. Under the most favorable circumstances, when the germicide is given by mouth, the germs can be destroyed in from twelve to fourteen hours. Thus it has been possible to measure the effect of the toxins on the various organs of the body. Exhaustive experiments were carried on in influenza and semiparasitic animal infections in which many thousand cases were treated. In the course of these experiments it developed that the effect of the toxins on the gastric nerves sometimes results in complete suspension of the digestive functions. Of course this was nothing new. Loss of appetite indicates impaired digestion. A sick animal does not eat because his instinct teaches him

that it is useless to put food in his stomach to putrefy if he is to derive no benefit from it. But these experiments were a conclusive corroboration. They were carried on as follows:

The germicide was given by mouth. Results could be expected in from twelve to fourteen hours if digestion was not impaired. If no results were obtained, the germicide was given by intravenous injection, which, in most cases, proved effective. In an attempt to clear up the gastric disturbance, alcohol was given with the germicide and an immediate absorption was obtained, the case responding at once and thus demonstrating that alcohol acts as an antidote to the effect of the toxins on the digestive organs. To grasp the importance of this fact we must understand how the body forms its antibodies.

The cells are the active basis of all animal and vegetable organization. According to Ehrlich's side-chain theory, which is the best conception of the phenomenon, a cell is composed of a central nucleus upon which its life and activity depend. Attached to the nucleus are a variable number of subsidiary mouths or receptors (side chains) by which the nutrition of the cell is regulated. These receptors differ from each other in certain chemical affinities, according to the nature of the food molecules to be absorbed by the cells. The many different body cells (for example, the blood cells, the nerve cells, the

muscle cells), varying in nutritional requirements, account for a considerable variation in the receptors. Ehrlich conceived that toxin molecules may accidentally possess the same affinity for certain receptors as the food molecules which the latter are accustomed to receive under normal conditions. To the possibility that different disease germs are attracted by a different set of side chains is attributed the specific immunity which follows various infections. When infection occurs the germ or its toxin becomes affixed to a receptor with the result that not only is the cell deprived of necessary nourishment, but injury or complete destruction may also follow. The cell rids itself of this condition by casting off the receptor, and its loss stimulates regenerative cell activity to replace the damage. According to Weigert's law of regeneration, the defect in the cell structure is repaired beyond the necessary measure. Each individual receptor which the cell loses is replaced by numerous mouths, of which the fittest will remain with the mother cell, the remainder being cast off into the blood circulation, where they act as antibodies. The same law of regeneration is common in the vegetable kingdom. If a limb is removed from a tree, many small branches will spring forth to supply the requirements of the roots, the most favored branch crowding off the others, just as in the case of the new mouths which the cell produces

without intending to retain them all. The free receptors thrown off into the circulation (antibodies) retain their affinity for the germs and their toxins. They combine with these, and thus putting an end to their activities, render them harmless. All this is dependent on the cells receiving their accustomed nourishment from the digestive organs. When this is cut off not only are the cells weakened, but even the incentive to form new mouths no longer exists, since there is no food to fill them, no work for them to do. Thus we see that alcohol, by its antitoxic action on the digestive organs, may be the saving factor which enables the body to form the protective antibodies which are its main defence against disease.

In the summer of 1918, when influenza, which had broken out in Europe in virulent form, was threatening invasion, but before the great pandemic had actually reached our shores, the records of these experiments were laid before the Medical Section of the Council of National Defence at Washington. It was not long before the disease found its fatal way here, and it soon became epidemic. The concentration camps were among the first to suffer from its ravages. After every other treatment had failed, alcohol in the form of whisky was resorted to. There was an immediate drop in the death-rate. One young buddy who was driving the dead wagon in a

112 *THE EIGHTEENTH AMENDMENT*

southern camp tells the story that his nightly load of forty coffins was reduced to three or four through the introduction of the whisky treatment. Stories like this continued to come from the camps, but no move was made on the part of the American Medical Association to modify its resolution against alcohol, although the work amongst the soldiers was in charge of high officials of the association and they were daily receiving proof of the value of alcohol in the treatment of disease. But the Eighteenth Amendment had not yet been approved by the Supreme Court and, if the truth were known, it might nullify all the work which the organization had done to further the cause of prohibition. However, the public was not slow to appreciate the importance of the facts, familiar to them through personal experience, the evidence of friends, and the columns of the press.

CHAPTER XVI

ALCOHOL AND FATIGUE

From time immemorial alcohol has been used by man to counteract the effect of too great mental or physical effort, or what we call "fatigue"; and because the body responded to alcohol, and relief was obtained, it was looked upon as a stimulant. This very natural mistake has been handed down for generations. Alcohol is not really a stimulant, as we understand the term. The stimulating effect which it produces in the tired worker appears to be due to its power of acting as an antidote to the fatigue toxins. As long as the effect is there, it is a matter of little consequence to the ordinary individual how it is brought about. Nevertheless, it is of importance to our subject, for to ignorance on this point can be traced many of the abuses for which alcohol has had to shoulder the blame.

Fatigue is nature's five o'clock whistle—the signal that our day's work should be brought to an end. In its daily toil the body burns up a certain amount of tissue. This is replaced by the foods we eat, but the capacity for replacement is limited by the capacity of the digestive organs. The waste of tissue,

therefore, must also have a limit; and fatigue has been provided to warn us when this limit is approaching. The more we study the human machine, the more we find cause to marvel at the Omniscience which created it.

Our knowledge of fatigue is still very limited. In 1904 Weichardt announced that he had discovered a specific substance, a fatigue toxin, which he claimed was the chief cause of fatigue, and against which the body was able to produce an antitoxin. To test this theory, Lee and Aronovitch (Department of Physiology, Columbia University, N. Y.) instituted a series of experiments. Cats and rabbits were fatigued by running in a revolving wheel. After the animals were thoroughly fatigued they were killed, the muscles of the hind legs were removed and the muscle juice extracted. This juice was then injected into the peritoneal cavity of guinea pigs. As a "control," a similar experiment was carried out, the muscle juice of non-fatigued animals being used. The results in both cases were some disturbance of respiration and an immediate fall of temperature. The fall continued from thirty minutes to an hour and was followed by a slower return to normal. Some of the animals died on the following day. This occurred in the case of the "control" animals as well as in those which had been treated with the juice from the fatigued muscles.

It would therefore appear that there is in the normal muscle a substance which, when brought into contact with other parts of the body, produces a toxic effect.

The body eliminates its waste tissue through the circulatory system. It is carried off in the venous blood and is finally emitted by way of the lungs. Every muscle is supplied with blood vessels and lymphatics. With this information to build on we may conclude that the use of the muscles eventually releases certain toxic substances which, finding their way into the circulation, are the direct cause of fatigue.

We may now go a step further. When the fatigue toxin reaches the circulation, an antitoxin is set up. Thus we find the individual, let us say the blacksmith, who uses his muscles regularly in the course of his daily work, can do this without being tired. On the other hand, the office worker who suddenly takes up some strenuous exercise is rapidly fatigued; but if he continues the exercise his body will become accustomed to it and he will no longer feel fatigued, because the antitoxins have been produced. There is however a limit to muscular exertion, and when this limit is reached the muscles draw on the other parts of the body and the nerves become affected.

The process of mental fatigue is not so clear. We know that the nerves can be trained to withstand a

certain amount of strain, just as our muscles can be trained. But it is apparent that the brain cannot be used—or at any rate is not so used in ordinary life—with the same regularity as the muscles of the workman. The bricklayer performs the same task day after day, while the business man may be suddenly called upon, after a week of routine, to decide some momentous question which will require the best thought of which he is capable. If from this effort antitoxins are set up, they are gradually eliminated until some new crisis brings a reproduction. The manual worker, for his part, may suffer another form of mental fatigue. A common case is the fatigue which is the result of monotony of employment or environment. American industries have been standardized to a great extent. A job which necessitates doing the same thing over and over again, attending interminably to the same detail, affords no mental relaxation. The mechanic who bores the same-sized hole in wood or metal thousands of times during the work-week becomes subject to a nervous strain, which may be more or less severe according to the disposition and habits of the individual. A country boy, coming from a farm where the work and surroundings are varied and entering upon a job of this sort within the four blank walls of a machine shop, will feel the strain more than the experienced mill hand. Monotony such as this may be described as

a passive monotony in contradistinction from the active, aggressive monotony which is forced upon the mind of the worker in the never-ending shop noises or eyestrains—the steam hammer of the boiler shop, the whir of machinery, the dizzying revolution of wheels, and so on. The wearing effect of any such form of monotonous repetition was recognized by the Chinese in one of their well-known punishments—the tickling of the soles of the feet until the nervous system was completely shattered.

These are some of the causes of the everyday changes which occur within the body and must be taken into account in any study of the effect of alcohol upon the human system. To make a man the mechanical subject of a laboratory experiment without any consideration of his previous history, and feed him alcohol in the hope of obtaining accurate data as to the effect of the drug, is merely ridiculous.

Here is a simple test which the reader, if he is accustomed to using alcohol in moderation, can make for himself. If he has spent a quiet morning, with nothing to disturb his physical or mental poise, let him take a drink of alcoholic liquor—a cocktail or whisky—at luncheon time. In a very short while the slight feeling of exhilaration will wear off, and in its place will come a feeling of depression. Let him, however, take the same drink before his evening meal—after a hard day's physical or mental labor—

and there will be a sustained feeling of stimulation. Where alcohol is taken to overcome the effect of fatigue, depression seldom follows; for just as alcohol will counteract fatigue, so the fatigue toxins seem to prevent the depressant action of alcohol.

Have you ever noticed how much more easily the manual worker becomes intoxicated than the man who works with his brain? The fatigue antitoxins which physical labor sets up appear to be more constant than those which may be produced by mental effort. Consequently, in the steady manual worker there is little to offset the intoxicating effect of alcohol. There are many instances to show the slight effect alcohol will have on those who are undergoing severe mental strain. A colonel of artillery in one of the armies of the Allies tells the story that, during the German drive for the Channel Ports in the spring of 1918, he and his officers on some days drank a quart of Scotch whisky apiece with no more effect than if it had been so much water. A farm hand may become intoxicated on three per cent. cider, because his work does not cause mental strain. A mill hand may drink with impunity on Friday night an amount of alcohol which, if taken on Monday after his day of rest, would make him drunk.

One of the strongest arguments for prohibition was the harm done by the corner saloon. A large part of the saloon patronage came from the laboring

classes. Their ignorance of the proper use of alcohol often led to excesses, and thus the saloon became a public nuisance. Would it not have been better to attempt to dispel some of the ignorance which has surrounded alcohol than to attempt to enforce a nation-wide prohibition which is bound to result in failure? The question has already been answered by the disastrous results which followed war-time prohibition and are now emphasizing the contempt-of-nature provisions of the Eighteenth Amendment.

So many arguments and data have been advanced to show the harmful effects of alcohol that the reader will doubtless require on the other side more than the mere theory of the value of alcohol as related to fatigue. Some years ago the subject was brought home very forcibly to the author, and as a result a series of observations was undertaken to determine the value of alcohol as an antidote for fatigue in athletics. For this purpose (to say nothing of other purposes) no sport can equal golf. The golf stroke itself, from the short put to the full stroke, requires the most exact coördination of mind and muscle. During the swing the head of the club travels varying distances, from a few inches to over twenty feet. The most perfect rhythm must be observed, the club head travelling at its maximum speed just as it comes in contact with the ball. While the player may make his strokes instinctively, nevertheless every oppor-

tunity is given for mature deliberation and a fault which may spoil one stroke can be corrected at the next. Thirty-six holes of golf require about six hours of physical effort, and there is no greater mental strain in any sport than can be found on the putting green when the match is close and the prize worth winning. In the full stroke the value of muscular power is fully demonstrated. The three-quarter and half strokes and the wrist shots supply a perfect test of mental control. To apply the proper speed to the club head, to play a ball from a cuppy lie and drop it within a few feet of a hole one hundred and thirty yards away, is a test of delicacy of touch which will compare favorably with the finest laboratory measurements. The results are all set forth accurately on the score card.

In the observations made for comparative purposes, many prominent golfers unwittingly took part. The results were almost invariably the same. Where a moderate amount of alcohol was taken at luncheon time, the play of the afternoon compared more favorably with the morning round than where total abstinence was observed. If more than enough alcohol to counteract the fatigue of the morning were taken, the toxic effect of the drug could be seen in the falling off of the play. The following scores, with the distances, are submitted to demonstrate to our labo-

ratory friends that a man may still take a cocktail occasionally without impairing his efficiency.

GOLFER No. 1

Date: July 8, 1906

Alcohol. One Martini cocktail, one Scotch highball: approximately 45 cubic centimetres.

Conditions. No golf for two weeks previous to day of score. Morning round mediocre, score not kept.

	1	2	3	4	5	6	7	8	9	Total
Distance	427	276	106	240	580	555	396	210	155	
Score	5	4	2	4	6	5	4	4	3	37
	10	11	12	13	14	15	16	17	18	
Distance	300	344	309	275	382	470	255	140	260	
Score	5	4	4	4	5	5	4	3	3	37
										<hr/> 74

This score established an amateur record for the course. As every golfer knows, the mental strain increases towards the end of a record score, which one misplay may spoil.

GOLFER No. 2

Date: October 22, 1916

Alcohol. Two Martini cocktails, one Bass' Ale: approximately 75 cubic centimetres.

Conditions. Eighteen holes played the afternoon before. No golf on the five previous days.

	1	2	3	4	5	6	7	8	9	Total
Distance	212	312	326	140	540	606	640	180	350	
Morning	3	5	4	3	6	6	7	4	5	43
Afternoon	3	4	4	3	5	5	6	3	4	37

122 *THE EIGHTEENTH AMENDMENT*

	10	11	12	13	14	15	16	17	18	
Distance	380	360	455	565	280	150	363	120	225	
Morning	5	5	6	5	4	3	5	3	4	40
Afternoon	5	4	6	x	x	x	x	x	x	15
										<hr/>
Total for Morning										83
Total for Afternoon										52

This score was made in the finals of a club championship, which fact formed the mental hazard. The match ended with a victory on the twelfth green. An interesting sidelight is that on the same day the year before the same contestants met in the finals of the same championship. For that occasion the scorer had been on a training-table diet for two months and played the whole match without alcoholic stimulation. In the morning round he recorded an eighty-two, but in the afternoon he began dropping strokes and was finally defeated on the fourteenth green, his score showing ten strokes worse than the one recorded here.

From these and a great many similar records it seems clear that when alcohol is taken only in sufficient quantity to offset the effect of fatigue, it does not interfere with accuracy of performance or the will to win.

CHAPTER XVII

FATIGUE AND DISEASE

The craving for alcohol which fatigue produces is a natural craving, that is to say, the body is only expressing a demand for something which it really needs and for which it will be the better, once it has been obtained. Fatigue is a very real cause of bodily impairment. How serious a factor it may become is now fully recognized. Sleep is the sovereign remedy, but as an emergency treatment alcohol supplies the most effective antidote. Sleep is not always obtainable when it is most needed; the sluggard may be drowsy with over-indulgence, while the keen worker and keen brain, the strained and exhausted nerves, may look in vain for nature's quiet hand to knit up "the ravell'd sleeve of care." Or time may press; we cannot leave our work unfinished and go calmly to bed; the task, whatever it may be, must be finished, and finished efficiently. We have only twenty-four hours a day to live on, as Arnold Bennett points out; and sometimes alcohol, used with judgment, will enable us to get and give full value for every one of the twenty-four. To withhold alcohol under conditions which clearly call

for its use, is a very serious responsibility. The prohibitionists may affect to ignore this responsibility, but they lay themselves open to the specific charge of making their own profit through others' loss. In this connection one may properly point out that in spite of its resolution professing to condemn alcohol absolutely under all conditions, the American Medical Association *permits its members to make an enormous profit through their monopoly of prescribing alcohol for medical purposes*. A little more outward consistency might at any rate be expected.

Fatigue may cause injury by its direct effect upon the system, or it may act indirectly by lowering our powers of resistance and thus lay the system open to attack by the germs of disease. One of our leading American pathologists has expressed his firm conviction that in the course of time fatigue would be recognized as one of the main causes of disease; and Sir James Paget is quoted as writing: "You will find that fatigue has a larger share in the promotion or transmission of disease than any other single causal condition you can name."* Nervous prostration and other similar affections are examples of the direct effect of fatigue. The disastrous ending of Mr. Wilson's Western speaking tour in favor of the League of Nations showed how serious may be

* "The Human Machine and Industrial Efficiency"; Lee, p. 79.

the effects of fatigue caused by great mental and physical effort following a long period of overwork. If the President, to set an example to the nation in the observance of war-time prohibition, deprived himself of necessary alcoholic stimulation, he was a victim of the ignorance which brought this measure upon the country, and his misfortune can never be wholly repaired now. It is so easy to destroy, so hard to rebuild. But valuable as alcohol may be in such emergencies, to arrest destructive action and restore the equilibrium of the system, we find its greatest usefulness in the relief of the lighter cases of fatigue-strain, which, if persisted in, will lower our powers of resistance and impair our physical fitness. Every athletic trainer knows the danger of getting his squad too "fine." Overtraining is the result of a greater effort than the recuperative powers of the body can take care of, the cumulative effect of a small surplus of fatigue produced daily or at frequent intervals, with the consequent injurious action on the body.

The individual cannot stand alone. His physical deterioration is a menace to the whole community. We are only just beginning to understand the meaning of virulence in infectious disease. It is possible to breed the germs of disease and increase their natural powers precisely as we are able to improve the breed of our draft horses or dairy cows. Nour-

ishment and congenial surroundings are the foundations of this improvement. In the impaired body, which is able to offer only a weak resistance to the progress of an infection, the organisms of disease find a host altogether too hospitable; they feel happily at home and are able to attain their highest development. A little care, an ounce of prevention,—in cases such as this an ounce or so of alcohol,—would have saved the proverbial pound of cure. Yet how often do we hear the expression, "Prohibition means nothing to me, I never drink alcoholic liquors"? The man whose life runs so smoothly that he never needs manufactured alcohol may or may not be a fortunate individual, but he will find that prohibition, if enforced, will have for him a very real meaning on account of the malnutrition it will be responsible for among his neighbors whose need for alcohol is distinctly different from his.

The great influenza pandemic already referred to,* which reached this country in the late summer of 1918, is an example of the serious conditions which are to be expected as a natural consequence of fatigue and malnutrition. For four years Europe had been undergoing the physical and mental strain of the greatest war in history. In most of the belligerent countries, control of foodstuffs was resorted to and laws were passed reducing the consumption of

* See Chapter XV.

alcoholic beverages. While it is too much to say, with so many conditions favoring disease, that depriving the workers of necessary alcohol was the primary cause of the scourge, nevertheless it is a factor which cannot be ignored. If more attention had been paid to the study of fatigue and its alleviation by alcoholic stimulants and other proper measures, the sweeping disaster might have been avoided or at least minimized. Sixteen months after the beginning of the war, the British Committee on the Health of Munition Workers gave the following picture of conditions in Great Britain: "Taking the country as a whole the Committee are bound to record their impression that the munition workers in general have been allowed to reach a state of reduced efficiency and lowered health which might have been avoided without reduction of output by attention to the details of daily and weekly rests." It is difficult to find a more monotonous occupation than the manufacture of munitions. In March, 1917, the Food Controller, Lord Devonport, reduced the annual output of beer in the United Kingdom from 26,000,000 barrels, which had been allowed for the year ending March 31, 1916, to 10,000,000 barrels. Six months later the Health of Munition Workers Committee wrote: "The conditions are not the same now as they were in the early days of the war; not only have large numbers of the youngest and strongest

workers been withdrawn for military service, but those who remain are suffering from the strain inseparable from a continuous period of long hours of employment. . . . The effects of the strain may even have been already more serious than appears on the surface, for while it is possible to judge roughly the general condition of those working in the factory to-day, little information is available concerning the large number of workers who, for one reason or another, and often because they find the work too arduous, are continually giving up their job." In many of the other countries the conditions were far worse.

The danger to the health of a community which may result from depriving the normal human being of alcohol was convincingly demonstrated by our own experience during mobilization. When the draft called our millions to the colors, it took the pick of the nation's manhood. Men in the prime of youthful vigor were selected after a careful medical examination and sent away to the concentration camps. It is true that the camps were sometimes crowded, but many of these men came from the crowded quarters of our large cities. It is also true that they were unable to choose their own food, but their rations were selected by men of experience and should not have affected their physical condition adversely. The one great dietary change which came to them

when they entered the Army was that they were no longer able to obtain the customary alcoholic drink to meet their bodily requirements. They were then put through a severe course of physical training, and in addition to the fatigue produced by this muscular exercise, they were continually subject to the mental strain of the thought of separation from home and family to take part on a foreign soil in the greatest war in history. It is no wonder that epidemics broke out in these camps, nor is it surprising that the death rate from diseases like pneumonia should have been two or three times the normal. When we hear stories of the great improvement which prohibition has wrought in some homes by the reformation of the drunken husband, we must think also of the fathers and mothers whose sons were carried off in these camp epidemics through official ignorance of the proper use of alcohol. Drunkenness is a vice, but it is curable. No one can cure death.

CHAPTER XVIII

THE ECONOMIC SIDE OF PROHIBITION

Before discussing prohibition more closely from the economic standpoint, let us consider some of the conditions by which we are surrounded—conditions under which we are permitted to exist. We are all subject to certain natural laws,—man and beast, fish and fowl, insect and plant life. From chaos to the present day there has been, it is hoped, a gradual improvement in terrestrial life. That this improvement may go on, nature endeavors to maintain an even balance in her dealings with her creatures, so that those who by their own efforts rise above the general mass may go forward, while those who slip back fall finally to oblivion. Where man has gained a thorough knowledge of particular conditions, he has frequently been able to improve on nature's methods. But too often, through a facile enthusiasm born of ignorance, he has run counter to nature's purposes and has thus been brought to disaster. Take as an example some of the legislation designed to protect wild life. Bounties have been offered for the destruction of certain predatory birds, because the in-

jury they did seemed obvious; yet when they have been driven from the locality, it has been found that these very outlaws had been keeping down dangerous vermin, which became an uncontrollable pest as soon as nature's guard had been removed. This leaping before looking is typical of prohibition to-day. The average temperance worker may have excellent intentions, but he knows little or nothing about alcohol from the scientific side. He has had the usual experience—an intemperate friend or acquaintance, some information gleaned from police courts or police reports, some misinformation absorbed from the ranting of an ignorant enthusiast, mistaking denunciation for demonstration. Yet through organized effort the prohibitionists have been able to impose their will upon the legislatures of the country and engraft upon the fundamental law a measure which should never have passed beyond the dignity of a village ordinance. It is an extraordinary case of wholesale modern dragooning. But intolerance does not cease to be vicious simply because it is exhibited on a vast scale. Congress cannot repeal the laws of nature. Be sure of one thing: evolution will never bring any species down to the level of its unfit. And no nation can adopt measures which sacrifice its manhood and womanhood for the benefit of its drunkards and debauchees and still hold its economic position. The country will go forward, but there

will be a good deal of wreckage to be cleared out of the way.

A nation's economic position is dependent on—1. natural resources; 2. industry; 3. commerce; 4. thrift. With industry is included the health and efficiency of the workers, and thrift embraces the thrift of the people themselves and the conservation of the nation's finances and natural resources. Practically all national wealth is the result of industry, for however favored a nation may be in natural resources these can only be brought into marketable form as the result of labor. To reap the reward of industry, labor's product must be bartered. If a nation is able to produce a surplus in excess of its own needs, it may add to the national wealth by exchanging this surplus for some form of permanent property, or for some product which can be produced more cheaply abroad, thus releasing labor for more remunerative production at home.

It is still too early to estimate the effect of prohibition on our industries: first, because of lack of effective enforcement, and second because, following so closely upon a great world upheaval, during which labor's powers of production were taxed to the limit with the natural consequence that wages rose with the increased demand, many disadvantages which might be attributed to prohibition may be due wholly or partly to other conditions. It is much easier to

disprove the economic arguments of the prohibitionists than to arrive at definite conclusions on the other side from the records now available. It will require a long time and a careful study of statistics before we shall be able to gauge the full effect of the new order of things upon the country. While certain outstanding facts may be considered, the question as a whole can only be discussed in principle.

What will be the effect of enforced prohibition upon labor? A requirement of primary importance for productive industry is that labor must be well and suitably fed: because if the body is undernourished, its capacity for physical effort is lowered, and because starvation, whether sudden or gradual, naturally breeds discontent and may lead to revolution in the future as in the past. But a man may eat his fill and yet starve his body. Any radical change of diet may cause malnutrition until the people have accustomed themselves to it. Malt liquor has been an important part of the laborer's diet. It is no easy matter to provide a substitute. Since national prohibition went into effect the country has been agitated by strikes and other forms of labor unrest. Lowered production is everywhere apparent. Here is the report of a special grand jury that has been looking into the cause of housing shortage in the City of Cleveland:

"The testimony adduced indicates conclusively that it requires approximately twice as long with the same number of men to erect a house to-day as it did in pre-war times. Impartial tests show that it takes twice as many carpenter hours to do carpenter work on a building as it did five years ago. Bricklayers lay less than half the number of bricks; paperhangers, painters, and plasterers all do less than half the work in the same time that they did five years ago.

"Manufacturing firms which make and sell building materials prove by their records that while wages have gone up 200 per cent. in some cases, labor costs have gone up 400 per cent., indicating that the employees are getting double pay for one-half the work as compared with before the war."

These conditions have been duplicated in many of the cities throughout the country, and though wages have been tending to come to a lower level under the pressure of industrial necessity, there has been no recognizable readjustment of the work-rate in the direction of pre-war efficiency. The very thing which has occurred—deterioration—was predicted by the leaders of labor. The following is the opinion of Mr. Samuel Gompers, President of the American Federation of Labor, as to the effect that prohibition

would have upon the working man. This effect is only the natural sequel of causes which science has fully explained.

"It is not a question of right or wrong. It is not a question of whether we approve or disapprove of beer or drinking. It is his habit. And when you invade a man's habits, what happens? You upset that man. You unsettle him. Uprooting one habit uproots others. And you find that the man who was heretofore satisfied to labor as he had been laboring, to go home nights and talk or read, becomes restive and discontented. Instead of sitting down to rest and read, he goes out into the street. There he meets other men, restless and unsettled like himself. And in the rubbing together of their mutual grievances there are sparks and sometimes fire.

"I have heard it stated, and I believe it, that the birth of the Bolsheviki was in prohibition. Harmful as vodka was, it enabled the Russian peasant to find surcease from the dull monotony of his life. Without it he found only trouble and torment and the desire to tear down what he could not rebuild. And to-day Russia lies bleeding, tortured. It was too big a price to pay.

"It is time for all of us to recognize the fact that a thing like prohibition cannot be attained by executive decree.

"It cannot be pounded, with heavy hand, from the top downward. It must, like democracy, flow from the bottom upward."

In the prohibition propaganda, much capital has been made of the alleged foodstuff waste incident to the manufacture of alcoholic beverages. Dr. Fisk, in his book on alcohol, says:

"Exact figures are not obtainable, but it is conservatively estimated that probably 110,000,000 bushels of grain are utilized in the manufacture of alcoholic beverages. Grapes and molasses (152,000,000 gallons) must not be forgotten in considering these matters. Grapes utilized for sweet wines when converted into raisins constitute a most valuable preserved food, and this wine-growing industry might well be transformed into a food-growing industry.

"It has been estimated that enough grain is used in this country in the manufacture of alcoholic beverages to supply 11,000,000 loaves of bread daily.

"In addition to the grain used in the manufacture of beer, as at least approximately stated in the proclamation of the Brewers' Board of Trade (70,505,488 bushels), there should be considered the 39,000,000 bushels of corn, rye and malt used in distilling spirits, one-half of which

was used for industrial purposes in 1916. Also there must be considered the labor of those engaged in the brewing and distilling business as well as in the liquor-selling business. The loss to the country involved in depriving real wealth-producing industries of the labor of these men and the destruction of coal, gasoline, steel, wood and other material that is used in the alcohol industries, must also be figured in the bill against alcohol—the purely economic bill.

“The plea, therefore, that grave industrial and economic injury would result from prohibiting the manufacture and sale of alcoholic beverages naïvely ignores the real effect of such a measure, the diverting into healthful occupations of those now engaged in unhealthful occupations that involve the destruction of food and the manufacture of a poison instead of the production of wealth.”*

No objection whatever is made by the prohibitionists to what they please to term “food waste” and “loss to the country involved in depriving real wealth-producing industries of labor,” etc., when it occurs in the process of manufacturing fruit syrups for the soda water fountain or unfermented beverages from grapes, apples and other fruits.

* “Alcohol—Its Relation to Human Efficiency and Longevity”; pp. 147, 152-4

Dr. Fisk's grain figures look large by themselves, but, like so many of his statements, they lose their impressiveness as soon as they are placed in their proper perspective. The United States produces annually about 5,400,000,000 bushels of grain, so that 110,000,000 bushels is only about two per cent. of the total. If the grain used in the manufacture of alcohol and alcoholic beverages were all loss, the cash equivalent would still be less than we pay for the activities of the rat. As a purely business proposition, extermination of the rat would be a better and cheaper undertaking than elimination of the liquor industry.

But even conceding that as the demand for grain for home consumption increases, the 110,000,000 bushels used in the manufacture of alcohol may take on a growing importance: what then? In the first place, there is a good deal of acreage that the farmer does not always use to its full extent. It is better for him to plant and sell than deliberately to restrict his output. In the second place, this alcohol grain was not entirely lost to other industries. Thirty-five per cent. of the grain used in brewing beer was returned to the farmer as a dairy food. Sorensen, a Danish authority on the pure food question, has recently demonstrated that when barley, which is the principal grain used by brewers, is fed to cattle only 51 per cent. of the food value is utilized. On

the other hand, when fed in the form of brewers' grain 61 per cent. of the nutritive value is retained. In the third place, will prohibition stop the alleged waste? To-day our brewers are using the same grain in the manufacture of non-alcoholic beers. The difference from the economic standpoint is that the product has lost much of its food value.

There is still another side to the question. The people are now buying grain and making their own beer. Signs like the one below have become familiar in the grocers' windows:

MAKE YOUR OWN AT HOME

ASK US HOW

While home-made beer has the full food value, the grain from which it is made goes into the swill pail and is lost to the farmer and cattle breeder. Yet the argument of grain waste is still being used to promote the cause of prohibition. Dr. C. W. Saleeby, the British authority on eugenics and an advocate (but scarcely authoritative) of temperance, speaking at the international conference against alcoholism, expressed the opinion that England must adopt prohibition as a grain conservation measure. The childish simplicity of some minds is truly remarkable. The law of supply and demand cannot be long evaded by governmental fiat. The economic

question to be considered is not precisely how much grain, grapes or molasses is destroyed in the manufacture of alcohol, but whether it is better and cheaper for the nation to obtain its alcohol in this manner, or through sugars, starches and other alcohol-producing foods in the form of candies, sweets, etc. A rather interesting comment on Dr. Saleeby's statement is provided by the Act of Parliament which has just been passed, removing many of the war-time restrictions on the sale of manufactured alcohol and allowing the brewers and distillers to return to the pre-war standard of strength.

How will prohibition affect our commerce? Wine making is an important industry in many of the countries of Europe. Before the Great War the United States received large consignments of wines from France, Italy and the Rhineland, and whiskies and ales from Britain. Our markets for these products have now been closed to Europe. This is particularly unfortunate because of the condition of foreign exchange. When the new Greenback party came into power in the United States they set an example, in their "elastic currency," which started the printing presses of the European nations in the busy production of paper money as a war measure. In June, 1914, the world's stock of gold coin and bullion far exceeded the amount of paper money in

circulation. The ratio of gold to paper at that time was estimated at \$141 gold to every \$100 paper. According to the latest figures, although the gold supply has increased, the ratio to-day (excluding the Bolshevik government) is only \$19 gold for every \$100 paper. Statistics issued by the British Government in November, 1919, showed that the expansion of currency, taking 1913 as par (100) was:

In the United States (up to May, 1910)	173
In Great Britain (August, 1919)	244
In France (June, 1919)	365
In Italy (April, 1919)	440

Substantial additions to the paper currencies of the Allied Nations have accrued since these statistics were compiled.

Great issues of paper money have been made in Germany. The Bank of Germany lost 1,458,508,000 marks gold during the year following the armistice, but added 13,669,154,000 marks to its note circulation. The gold cover on November 15, 1918, was 14 per cent., and a year later it had shrunk to 3.1 per cent. This currency inflation has of course been reflected in the rates for foreign exchange, as will be seen by reference to the following table. Serious depreciation has occurred even in the case of Great Britain, although she is producing large quantities of gold in her colonial possessions.

		Parity	Oct. 1920	Aug. 1921
Great Britain	Sterling	\$4.8665	\$3.435	\$3.65
France	Franc	.1930	.0645	.0772
Italy	Lira	.1930	.0374	.0432
Germany	Mark	.2380	.0141	.0119

It is perfectly obvious that foreign paper is no longer effective as a medium for negotiating a purchase in other countries. What is the solution? These nations must return to the ancient system of barter, or, what is but one step removed, must establish credits by the shipment of goods.

A substantial part of the export trade of Europe consists in the shipment of fine wines, brandies and other alcoholic liquors. These commodities must now find another market, for no one is foolish enough to suppose that France, Italy and the Rhineland will abandon their wine-growing industries to please American financiers who preach prohibition in their churches while their business associates invest their money in corn products, sugars and other alcohol-producing foods, which will become increasingly necessary with the enforcement of the Eighteenth Amendment. The credits set up by the wine-growing countries will be lost to America, and will be used to make purchases in other countries; cotton from Egypt, grain and beef from The Argentine, etc. In turning away this business we are deliberately encouraging trade with our competitors. Every de-

partment-store owner is familiar with the advantages to be gained by offering attractive bargains to bring customers into the shop. The loss of our wine-growing customers, and the trade which these exports to other countries will encourage, will undoubtedly lead to great commercial changes—how great we cannot now foresee.

The following schedule should be found interesting for reference.

Importations from Europe of alcoholic beverages for the year 1913 (the last year before the trade was interrupted by the war).

ENGLAND

Malt liquors and other beverages	
in bottles or jugs	872,964 gals.
in other coverings	575,245 "
Brandy	4,699 pf. gals.
Cordials	16,764 " "
Whisky	57,143 " "
Gin	703,070 " "
All other spirits distilled	33,836 " "
Champagnes and other sparkling	
wines	15,729 doz. qts.
Still wines in casks	32,352 gals.
Still wines in other coverings	5,586 doz. qts.

SCOTLAND

Malt liquors and other beverages	
in bottles or jugs	11,273 gals.
in other coverings	5,969 "

144 *THE EIGHTEENTH AMENDMENT*

Brandy	326	pf. gals.
Cordials	939	" "
Whisky	895,026	" "
Gin	4,950	" "
All other spirits distilled	6,034	" "
Champagnes and other sparkling wines	2,915	doz. qts.
Still wines in casks	2,581	gals.
Still wines in other coverings	725	doz. qts.

IRELAND

Malt liquors and other beverages		
in bottles or jugs	461,422	gals.
in other coverings	676,650	"
Brandy	610	pf. gals.
Cordials	23	" "
Whisky	162,175	" "
Gin	3,135	" "
All other spirits distilled	342	" "
Champagnes and other sparkling wines		
Still wines in casks	35	gals.
Still wines in other coverings	204	doz. qts.

FRANCE

Malt liquors and other beverages		
in bottles or jugs	71	gals.
in other coverings		
Brandy	487,445	pf. gals.
Cordials	190,027	" "
Whisky	739	" "
Gin	544	" "
All other spirits distilled	5,656	" "

Champagnes and other sparkling wines	246,361 doz. qts.
Still wines in casks	232,152 gals.
Still wines in other coverings	227,273 doz. qts.

ITALY

Malt liquors and other beverages	
in bottles or jugs	_____
in other coverings	_____
Brandy	10,980 pf. gals.
Cordials	168,569 " "
Whisky	245 " "
Gin	4 " "
All other spirits distilled	9,005 " "
Champagnes and other sparkling wines	1,575 doz. qts.
Still wines in casks	1,912,500 gals.
Still wines in other coverings	236,134 doz. qts.

ALL OTHER EUROPEAN COUNTRIES

Malt liquors and other beverages	
in bottles or jugs	95,193 gals.
in other coverings	4,978,397 "
Brandy	97,604 pf. gals.
Cordials	174,368 " "
Whisky	6,337 " "
Gin	139,352 " "
All other spirits distilled	117,011 " "
Champagnes and other sparkling wines	14,120 doz. qts.
Still wines in casks	1,713,619 gals.
Still wines in other coverings	173,295 doz. qts.

There is probably no more important influence on national thrift than the methods employed by the

government in raising the necessary funds to meet the national expenses. The question of what is the best form of taxation has been agitated by all political parties. Prohibition has deprived the treasury of over \$1,000,000,000 in taxes,* and this loss must be made up from some other source,—a very serious problem, coming as it does at a time when the country is overburdened with taxation. The Dry party has attempted to belittle the issue by statements that the loss will be made up by the saving which the new order of things will promote and that the excise tax is an immoral tax, based on drunkenness and vice. This is sheer nonsense. There is probably no better form of taxation than the liquor tax. Compared with our present income and inheritance taxes, it is highly moral. The excise tax sat lightly on the people. For those who used alcohol in moderation, it was negligible. It was an appreciable tax only on luxury and waste and acted as a restraint to self-indulgence, except in the case of those improvident people who like to indulge in luxury for its own sake. On the other hand, the income and inheritance taxes, in their graduated form, impose a burden on the industrious and thrifty for the benefit of the shiftless and improvident. In addition to all this, there is

* The figures given by Professor E. R. A. Seligman of Columbia University when testifying before the Senate Finance Committee.

the very considerable cost to the taxpayer of enforcing the amendment, for the necessary moneys for administering the Volstead Act and state laws like the Mullan-Gage Act certainly cannot be obtained from fines and penalties unless our revenue agents are prepared to encourage law-breaking.

In computing the expense of prohibition, we must add the increase in our food bill, for in limiting the sources from which alcohol can be obtained (and unquestionably the malting of grain is cheaper than any other method of producing it), the price of a necessary commodity has been raised, whether it is produced naturally in the system or is obtained by manufacture.

Eventually we shall be able to make an approximate estimate of the monetary cost of prohibition, but no one will ever be able to calculate the price we shall have to pay through the impairment it will cause in the morale of the nation. Hobson, the professional prohibitionist, has estimated that at the time the Eighteenth Amendment went into effect there were one million heavy drinkers in the United States—less than one per cent. of the population. To-day there are many millions of law-breakers, for the people have resented the intrusion upon their personal liberties and are not obeying the law. America has grown great because of the freedom which was guaranteed to her people under the Bill of

Rights given to us by the Fathers. This freedom has attracted some of the best blood of the old world, and the nation developed it under the Constitution. The men who were able to conquer a wilderness were able to conquer self. But the national character has now fallen so low that it must be taken in hand by a paternalistic government. It is a strange turn of the wheel of fortune that to-day, when the example which we set has borne fruit and democracy has spread throughout the world, the freedom which we once enjoyed should be distorted and strangled by bureaucratic regulation.

CHAPTER XIX

THE LAW AND PERSONAL LIBERTY

The legality of the Eighteenth Amendment has been upheld by the Supreme Court. A majority of the states, through their legislatures, have decided that prohibition is for the best interests of the country, and according to the court's decision they had the right so to amend the Constitution. The court has ruled that every technical safeguard that the Fathers provided has been fully complied with. The decision is of momentous importance to the people of America because of the questions of the rights of property, state rights and personal liberty involved.

There is a condition which no form of popular government has been able to guard against—the ignorance or apathy of the people themselves. In this case ignorance was organized—organized by selfish, sordid interests which hoped to profit by the new order of things. There is but one way in which this condition can be met by a law-abiding people; that is, by education and repeal. In the case of prohibition this is all the more difficult because the movement has been clothed in a false mantle of righteousness, by which the real situation has been

concealed. The weakness of the whole proceeding from the legal standpoint is shown by the fact that its promoters deemed it necessary to amend the Constitution, to nail the flag of prohibition to the mast-head as it were, beyond the reach of recall. If the measure had been wise, this would have been unnecessary. A law must pass the test of wisdom to survive. No form of enactment can prevent a vicious law from becoming a dead letter.

Law is the accumulated experience of humanity codified for use in the regulation of human relations. All law has its foundation in the laws of nature. By his inability to govern wisely, man has shown only too often that his interpretation of nature and nature's requirements was at fault. In every age, from the dawn of history to the present day, there have been periods when he has been led astray and has forgotten that there are limits to his lawmaking which nature has imposed and beyond which he cannot go. Whatever contradicts the fundamental naturally cannot prosper.

It is becoming more and more of a practice in legislation to place the interest of the community above the rights of the individual. We must not forget that the community is made up of individuals and that any injury to the latter may react upon the former. Prohibition is a serious invasion of the property rights of the individual. One of the pre-

dominant human instincts is our desire to own and enjoy what we have acquired as the result of our own labor. We have this instinct in common with the lower animals. It is the right of ownership with all that goes with it which induces the squirrel to gather nuts for his winter store. Nature prescribes individual ownership of what is necessary for individual development. This is the rock on which all socialistic schemes have split, from More's Utopia to Bolshevism. For large numbers of men, unless a spirit of almost inhuman self-sacrifice becomes more prevalent than we have any reason to expect, will never work for a state or community of all sorts and conditions, including the shiftless and lazy, as they will work for their own interests.

The right of possession, the right to own property, is fundamental in the laws of civilized nations. Land is the most enduring form of property. The titles to real estate are jealously guarded by law. Land is valuable primarily for what it will produce. The right of ownership carries with it the right to dispose of the products of the soil, including alcohol. That there are some people who make an improper use of alcohol is not a sufficient reason for preventing the landowner from selling his product, thus depriving him of a part of the value of his land. To prohibit the sale of alcohol, for the sake of those who abuse it, is no more just or right than it would be to prevent

the farmer from selling his wheat because there are some who injure themselves by overeating. There is an old saying that man digs his grave with his teeth. It has been computed that for every man who drinks himself to death there are eleven who die from overeating. But we have no constitutional amendment—unenforceable, of course—to prohibit the sale of meat or bread. The absurdity would be too self-evident even for the shallowest type of propagandist. Yet they cannot see the absurdity of prohibiting the sale of alcohol, which nature has made essential for the well-being of the human system. The fact that a medical labor union has denied this elementary scientific fact—and then proceeded to profit financially to an enormous extent by *denying its denial* (in practice) and prescribing alcohol for medicinal purposes—does not prove that nature has made a mistake and should be duly corrected. It simply proves that the medical authorities made no mistake in seeing that a monopoly in a vital commodity would be extremely lucrative.

A practical test of the wisdom of any enactment is to try to put it in operation. As a secondary though not always reliable test, we may inquire as to the knowledge and probity of the legislators who passed upon the law. It is little to the credit of those responsible for the adoption of the Eighteenth Amendment that they ignored the failure of prohibi-

tion when put to a practical test in other countries and in sections of the United States; nor does it speak well for their intelligence that they were willing to disregard a fundamental principle in our government, that in matters of intimate concern to the individual and the home the states are better fitted than the federal authorities to decide upon suitable action.

When the Constitution was adopted and the United States became a nation, the Founders recognized the principle of states' rights. Even at that time the difference in climatic and other conditions made it plain that there were certain matters which could only be regulated properly by the states themselves. The farseeing wisdom of those builders for future generations has become increasingly evident with the expansion of our territories. What was but a fringe of states along the Atlantic seaboard has become a great nation, extending from the Atlantic to the Pacific, from Alaska to Florida and the tropical Philippines. The fact that this expansion occurred during the railway age prevented the far greater differences of opinions and customs that would have been inevitable at an earlier period in the world's history. But the differences that exist cannot be ignored by statesmen or economists, and prohibition should certainly have been left for regulation to the states, which understood and could pro-

vide for local conditions and opinion. It is typical of the ignorance which surrounded the subject that the legislators of the granger states of the West should have presumed to pass on an enactment regulating the habits of the manufacturing and commercial population of the East; that the farmers of Kansas should attempt to tell the workers in the brass factories of Connecticut or the sailors of Rhode Island and Massachusetts what they must or must not eat and drink. We might as well expect the State of Florida to dictate to the citizens of Alaska what they must wear and at what hour they must go to bed. Nature is the only authority whose dictation fits the conditions.

The extent of the prohibition propaganda is even now perhaps not fully realized. It was limited only by the size of the fund which the interests behind the Anti-Saloon League were willing to supply. We can get some idea of the amount of money spent annually for prohibition purposes from the budget which the Anti-Saloon League gave out early in 1920, after prohibition had become an accomplished fact. This budget carried the stupendous total of \$27,-920,300. There is a good deal of persuasive force in practically twenty-eight millions of dollars.

The people's representatives, like the people themselves to a certain extent, were deliberately corrupted—not with cash, but with sophisms. For

years false information on alcohol has been pounded into the public, and our legislators have absorbed it. They may have the best intentions without having infallible intelligence. Corruption is corruption whether it is of morals or of mind. It was corruption in Shakespeare's time. It was thus that Iago was able to warp the mind of Othello. It is corruption to-day. Are we going to permit laws passed by such methods to stand upon the statute books? There is no such thing as personal liberty if we must be constantly on our guard against this kind of legislation.

Let us look a little more closely into the methods by which these modern Iagos were able to sway popular opinion and influence our legislators. We can pass over the appeals which were made to the lowest side of their natures, for although stories of intimidation and coercion are current, in a national movement such as this these would have but a limited influence. That bribery may have been used we will not question. We are only too familiar with the temptations that beset our public officials, and we have become accustomed to almost daily disclosures of graft in government departments. Where there are so many professional politicians we must expect some corruption of a gross kind. Law-makers are not the only lawbreakers: every class has its objectionable elements. But those who could

be reached by admittedly fraudulent methods were in the minority. A large majority of the men who voted for prohibition were either convinced that it would be for the good of the country or were willing to give it the benefit of the doubt and let it have a trial. If it proved a failure, that would be the surest way to end the agitation among their constituents at home.

In bringing legislators to this point of view, the stand which medical authorities had taken against alcohol was the deciding factor. When they wrote the word "Poison" across the label of the whisky bottle, it accomplished far more for prohibition than all the other propaganda put together. No more convincing argument could have been used, especially among those fathers and mothers whose children were just approaching manhood or womanhood. The father was besought to save his boys from the temptations that he as a young man had been subjected to. It possibly never occurred to him that it would be better to teach children how to use alcohol properly, just as they are taught to ride and swim, or to drive an automobile. Would it not have been better for the indulgent mother to teach her children self-restraint rather than turn their moral and physical welfare over to the United States Government, as if they were foundlings of the nation? Will our women, now that they have received the respon-

sibility of the suffrage, attempt to evade their natural duty of caring for their own offspring? What will be the effect upon the characters of future generations if this policy of parental suicide is continued?

It was among the women of the country that the medical propaganda was most effective. The mother in caring for her children through their early illnesses has come to rely on the family physician, and the trust which he has personally inspired has taught her a respect for official medical opinion. The practising physician stands between the people and the medical politicians. His word goes unquestioned because of general ignorance of the fact that his medical efficiency is limited by a strict control exercised by the leaders of his union. To use an expression of one of the shining lights of the profession, the practising physician is only the plumber who uses the lead pipe which is given him. The practitioner is exploited by the leaders of organized medicine just as the ironworkers, the carpenters and masons are exploited by the Sam Parks and Bob Brindells of the building trade. The disastrous results to medical practice are every day more apparent.

You can scarcely have forgotten the great influenza epidemic, when the people died by thousands and the dead lay unburied in the receiving vaults and undertaking establishments throughout the country. Long

before the outbreak of the pandemic science had mastered the disease, but the knowledge was suppressed by the medical ring for selfish reasons. Do you think these men would hesitate at such a little thing as conveying false information on alcohol to our legislatures if it served their own ends? When we realize the toll which disease is exacting from old and young alike, when we think of a life like Theodore Roosevelt's sacrificed to medical ignorance or indifference, it is only too apparent that new methods are badly needed, and that the revolt against the medical organization, which the prohibition controversy has so largely developed, must not end until present evils have been rooted out and the health of the nation has been placed in safer hands.

CHAPTER XX

THE LABOR UNION

In a country as large as the United States there are naturally many and varied interests, continually increasing with the development of the nation. What was once chiefly an agricultural community is now divided into urban, suburban and farming districts, railway and mining centres, mill towns, etc., with different problems to meet and different ways of looking at daily life. Each interest has grown in importance, and this has been reflected in legislation. Our industrial life has also been split up into its classes,—capital and labor, the employer and the employed, the producer and the consumer. Too often these classes have clashed, and they have lost sight of the fact that the welfare of the country as a whole depends upon the coöperation of all sections and groups.

No interest has grown in recent years as has the labor union, which is largely a development of a democratic form of government. The professional politician has turned from the organization of political bodies to the more profitable occupation of organizing labor. Some undesirable features have fol-

lowed, and the legitimate purposes of coöperative effort have not always been adhered to. Labor unionism, so far as it really helps the worker, is of course a good thing. If it interferes with the rights of others, as so often happens, it must be condemned. Where it runs counter to clear economic laws it becomes impossible, and the sooner this phase of the situation is cleared up the better for all concerned.

A brief review of certain aspects of trade unionism will bring out their bearing on the prohibition question.

The introduction of machinery, with its many labor-saving devices, has brought new problems into our industrial life. The greater output which can now be obtained has increased the value, or let us say the power, of capital. This in turn has put a premium on thrift and has added to the hardships of the lazy and improvident. For capital is nothing more than wages or some other form of income which the receiver has been able to save and then apply to lighten the task of the worker. The present vast accumulations of capital are both the result and the cause of efficiency.

We have only to look back to the early days of the American Colonies to realize the striking changes which have occurred through the development of our national industries. At the time when the Virginia and Plymouth Colonies had become firmly estab-

lished, a majority of the colonists were landowners and were able to support themselves, if need were, upon the products of their own land. The early settler was able to build his own house, raise his own food, and supply his own fuel and part of his clothing. His children, when old enough, furnished him with additional labor. He asked little from his neighbor except companionship and mutual protection against their common enemies.

With the growth of the colonies, trades and professions sprang up. The man who devotes himself to any one occupation, as the cobbler or carpenter, can do a better job and in a shorter time than the man who occasionally turns his hand to that particular trade. The specialists invested their earnings in better tools (their capital) or in labor-saving devices, as in the case of the miller who built his own mill. Thus it became advantageous for the landowner to employ these expert workmen, who could do better and yet cheaper work than he could do for himself. (What would the colonists have thought if a Plumb had arisen among them with a plan to turn the mill which the miller had built with his own hands over to his employees?) But it was not always profitable for the employer to have work done for him, because there were idle moments in his own day which would have been lost if he could not employ them in doing some of the things usually assigned to

others. No workman, however expert, can compete against the idle time of his employer. It may surprise some of the dwellers in our cities to hear that many farmers to-day, in addition to raising and marketing their money crop, produce most of their own food, even raising and grinding their own flour and meal and curing their own meats, and also doing their own mason and carpenter work and various other things to fill in the spare time.

The development of labor-saving devices is every day making it more difficult for the individual to compete with the machine, because his own time is becoming more valuable. Take as an example the service which is rendered by the railroads. Compute the expense of a trip from New York to Boston on foot or on horseback—the time lost, the hotel bills incurred—and compare this with the cost of the railroad ticket. Such time-saving devices have added to the importance and power of the labor operating them. But no industrial union has ever attempted to prevent the individual doing his own work himself. He may be denied the assistance of organized labor, but that is as far as they have ventured to go. If a man wishes to walk to Boston he is still at liberty to do so. It is vastly important to the development of our national life that the individual should be free to act for himself, not merely for the encouragement of initiative and invention, and so on, but because

the standard of organized effort is thus raised or at least maintained. Without the bracing effect of individualism, combinations would often deteriorate as the result of the very advantages they can command.

It has remained for the medical union to violate this principle. They have not only endeavored to control the practice of medicine, but have also tried through legislation to force their services upon the individual by placing curative agents beyond his reach, as has been done in the case of alcohol. As some perhaps may question the propriety of putting associations which have always posed as scientific in the same category as the organizations of ordinary labor, it should be remembered that they themselves have sought this classification. In the Bremer County case, which was carried up to the Supreme Court of Iowa, the medical organization successfully defended itself by pleading the right of "labor" to organize. And further, their strikes, boycotts and other labor union methods have been fully exposed in courts of this country and Great Britain.

The industrial unions have followed blindly the lure of higher wages held out to them by their leaders. They did not see that by standardizing labor and thus putting a premium on poor workmanship and a lowered output, they were increasing the cost of necessities to themselves as well as to the rest of the country. They have only recently begun to

realize that wages can be forced so high that they cannot afford to accept them. The laboring man is not an economist; he cannot be blamed for his short-sightedness. But it is one thing (and quite serious enough) for the labor unions to attempt to interfere with the law of supply and demand, and regulate the market for labor. It is another thing, and altogether too serious, for a medical union, in its frenzied efforts to control the profession, to bar the advance of science in the effective treatment of disease. Even the most thoughtless or ignorant can understand the harm resulting from this phase of labor unionism. And the laboring man has been the greatest sufferer.

Let me ask you, Master Carpenter: Do you think of the bonnie golden-haired daughter who used to meet you at the gate of an evening to take your dinner pail when you returned from your work? Of course you do. She has seldom been out of your thoughts since the day when you took her little body to the cemetery. It was a labor union that deprived you, deprived your physician, of what might have saved her life.—And you, Mr. Coal Miner. You have given the country a good deal of trouble in recent years. Do you think of that young wife so soon to become a mother who was carried off in the great influenza pandemic? Do you know that it was medical ignorance that was responsible for the high

death rate among pregnant women, and that a labor union kept the knowledge of proper treatment from the physicians of the country?—And you, wives of the trainmen whose leaders held a pistol to the head of Congress to force the Adamson Law upon the country. You were rather proud of that achievement, were you not? Many of your sons died in the epidemics of the army camps. Your loss would have been easier to bear if your boys had had the glory of a soldier's death upon the field of battle. But to be stricken down like rats in a camp epidemic was hard, very hard. Do you know that it was a labor union in control of the medical departments of the government that stood in the path of science, and so was able to continue improper treatments that have been failing in these diseases for two thousand years or more? When you talk with your Plumbs about unionizing our transportation system, look first and see what the union has done for our medical departments.

When the opponents of national prohibition undertook a careful inquiry into the various forces behind the movement, the medical departments at Washington were one of the first subjects of investigation. What followed was almost beyond belief. They found men, American citizens, wearing the uniform of the United States Army in war time, obeying the rules of their union but defying the laws and the Con-

stitution of the United States. These men were permitting disease to go unchecked rather than interfere with the interests of a private organization of which they were members. Is it any wonder that the country has been flooded with false information on alcohol when the people must rely for their medical knowledge on public servants such as these?

CHAPTER XXI

ENFORCEMENT

Can national prohibition be really enforced?

A fundamental error in dealing with the liquor problem is the conception of alcohol as a habit-forming drug. The prohibitionist has all along held to the theory that once alcohol was abolished, the regeneration of the drunkard would follow automatically. If this were true, the enforcement of the Eighteenth Amendment would be a simple matter compared with the problem with which the country is now faced. But if we accept the more enlightened view that alcohol is a necessary food, enforcement becomes all but impossible. No one will stand for compulsory starvation. The hunger striker may accept self-imposed starvation for the sake of a principle, but no one, if he can help himself, will permit starvation to be forced upon him by others. Therefore, to enforce prohibition the necessity for alcohol must be done away with.

We shall have a better understanding of the enforcement problem if we go straight to the question of the reformation of the drunkard. Most people are more or less familiar with the methods employed

in the institutions for the reform of inebriates. When the chronic drunkard takes refuge in one of these asylums, he is first weaned from the alcoholic drink. Sugars are substituted, and his system is accustomed to making its own alcohol. His body is built up by wholesome food, rational recreation, fresh air and exercise. Then the attempt is made to create within the patient an aversion to alcohol. In some of these cases the cure is permanent, in others the drunkard returns to his old habits. Where the institutions have failed is in losing sight of the fact that to cure alcoholism permanently, the need for alcohol must be eliminated.

In many instances, alcoholism is brought about through other habits of the individual. The old drink habit is compelling, but where we have a combination of this with a crying need of the body, we have a force which it is almost impossible to control. Take, for example, the son of wealthy parents with no special interest in life except his own amusement. His existence becomes monotonous, and it has already been shown that monotony, by its effect on the nervous system, contributes to the need for alcohol. When such a man has fallen into the drink habit and has then "taken the cure," the chances are that, unless he finds some new interest in life, he will return to his old indulgences. If not, the nerves may become affected and the system laid open to

attack by disease. Dr. Fisk tells us, "In the experience of the forty-three (life insurance) companies, among those who had taken a cure, but remained total abstainers up to the time of acceptance, the mortality was 35 per cent. above the normal."* When we have a better understanding of the liquor question, the reformation of the drunkard will be easier. But the present problem of reforming the whole United States along the lines laid down by the prohibitionist is one which staggers the imagination. We must either choose between alcohol or disease, or readjust the lives of all our people. The brass worker must leave the foundry for some less nerve-racking employment. The sailor must give up his voyages. Disease, worry, fear, must all be eliminated, and then, perhaps, prohibition can be enforced. Instead of prohibition bringing on the millennium, we must first have the millennium before we can expect prohibition.

The situation as it stands to-day is that a necessary commodity, a food which the people must have, has been taken away from them and put in the hands of agents of the government to be doled out as they see fit. The natural result has been that the price of alcohol has risen to an abnormal figure. When a condition like this arises we shall always find people

* "Alcohol—Its Relation to Human Efficiency and Longevity"; p. 25.

who are willing to risk the penalties of the law in order to reap a golden harvest only too easily obtained. But in the present case there is the further element that as so many of our citizens look upon prohibition as an encroachment upon their personal liberties, the lawbreaker is finding encouragement from all classes of society. Men of the highest character and attainment, statesmen, bankers, lawyers, authors, artists, business men and day laborers, all alike, are not only countenancing these lawbreakers, but they are violating the law themselves. They deny the right and the power of the government to supervise their personal habits and manner of life. There were many who thought, because they had given up alcohol at one time or another and had felt the better for it, that they would welcome prohibition. They did not realize the difference between abstinence by mental resolve and an abstinence forced upon them. Nor did they know that in many instances their fall from the water wagon was due to a need of the body which they did not know how to control. And so there are many good people who, while believing in prohibition theoretically, are now drinking more than is good for them out of protest. As Mr. Irvin S. Cobb has said so characteristically and exactly, prohibition simply prohibits sobriety among people who would otherwise be sober.

The enforcement law has brought with it a lawlessness on the part of the people never before known in the annals of the nation.* Violations of the Volstead Act have been followed by a wave of crime which can be traced directly to prohibition. The crimes committed vary in seriousness from infractions of the rules of the road by speeding automobiles of the rum runners, to the most callous murder. Between these two extremes are all sorts and kinds of criminal offences,—forgery, counterfeiting, smuggling, blackmail, extortion, illicit distillation, burglary and highway robbery, the sale of deadly concoctions, and the debauching of public officials. The details have appeared repeatedly in the newspapers and magazines. The reader may therefore be spared any repetition. The corruption of government agents is indeed a serious phase of the situation, for it has added to the power of the corrupt politician. The practical politician is familiar with the numerous opportunities for illicit profits which are always connected with measures for the regulation of public conduct. The health boards and the building departments of many of our cities have

* William H. Moran, Chief of the Secret Service Bureau at Washington, testifying before the Appropriations Committee of the House of Representatives, stated that the year 1920 (the first year of constitutional prohibition) was the greatest criminal year in the history of the secret service.

been hotbeds of graft, but as a breeder of nationwide corruption no previous legislation has ever equalled the Volstead Act. It would be interesting to know how many votes were gained for the Eighteenth Amendment by the prospects of the rich graft to be obtained in its enforcement. If there is anyone who doubts this, let him look at some of the characters appointed to carry out the provisions of the law—men so low that it has been an easy matter for the crook and impostor to impersonate them. Take the case of the enforcement agent who killed a chauffeur during a “wet” raid in New York City. His record is one of a long series of crimes. His early offences include petty larceny and the passing of worthless checks. He served four years and seven months of an eight-year sentence in the Indiana State Penitentiary. He then broke his parole and came East. He was convicted of robbery and sent to Sing Sing prison, where he served a six-year term. His last offence was killing the chauffeur, for which he was tried for murder in the first degree, and acquitted, through the able defence of a United States District Attorney. Even after his record was known, he was carried on the payroll of the United States. While this may be an extreme case, it shows the type of men to whom the government intrusted the mission of improving our morals,

for prohibition is still being bolstered up by this plea.

We are now beginning to understand the reason why so many of the states that have gone dry, stay dry. The Eighteenth Amendment has created a new brand of prohibitionist, the ex-saloon keeper and the cheap politician, with their long retinue of heelers who are realizing enormous profits through the illegal sale of alcoholic liquors at fancy prices. If an attempt were made to repeal the amendment, these men would be found lined up in its defence with the forces of the Anti-Saloon League. All this has added to the public resentment, which has been growing steadily since the passage of the enforcement legislation. The people of the states where the largest part of our population is located have not favored prohibition. This is true of nearly all the original thirteen states. Back in the 'fifties, thirteen northern states adopted prohibition, but they soon abandoned it, with the exception of Maine, where with the aid of the bootleggers the prohibitionists were able to retain the statute. An analysis of the vote on national prohibition shows that in states with a total population of over 63,000,000 people there either has been no recent expression of popular opinion, or the people have voted against it. In some instances, legislators chosen at the same election in which the people of the state voted against prohibition, reversed the popular decision and voted for

the Eighteenth Amendment. There is much the same feeling against prohibition in these states as there was in our forefathers' time against the Stamp Act,—with this difference, that the Stamp Act was imposed by a government in which our people had no voice, while prohibition was adopted by the very men whom the people elected, and they feel that these men have betrayed them.

To the resentment of the wets has been added a growing resentment on the part of the drys. Many a prohibitionist believed that prohibition would stamp out drunkenness. He is now beginning to realize that in its practical application, at any rate, prohibition is a failure. Light wines and beers have been almost done away with. Whisky, gin and other beverages of high alcoholic content have taken their place. Whereas before prohibition these high proof liquors were bought largely by the drink, they are now purchased by the quart, the gallon or the case. Quite often, when once a bottle is opened, it is not put away until it has been emptied.

The records of our police courts and hospitals are the best evidence of the futility of the Eighteenth Amendment as a temperance measure. When national prohibition first went into effect, there was a temporary falling off in the number of recorded cases of drunkenness, because the regular channels by which alcoholic liquors had been obtained ran dry.

It was not long, however, before new sources of supply were found. As the people began to adjust themselves to the change, the fact was recorded in an increasing number of cases of alcoholism. The conditions in New York City, the largest city in the Union, are typical of those in all parts of the country where prohibition has found no popular support.

The following is the record of the arraignments in the city magistrates' courts for the first seven months of constitutional prohibition:

Month	Borough of Manhattan	New York City
January	39	67
February	65	152
March	181	342
April	214	423
May	249	501
June	244	471
July	227	495

For the quarter ending December 31, 1919, the total number of arraignments was 936. During the quarter ending June 30, 1920, 1395 cases were arraigned.

The hospital figures tell the same story. Here is the record of the cases of alcoholism admitted to the wards of Bellevue Hospital, Manhattan, and Kings County Hospital, Brooklyn, for the first nine months of the years 1919 and 1920:*

* War-time prohibition went into effect on July 1, 1919; constitutional prohibition on January 16, 1920.

BELLEVUE HOSPITAL

Month	1919	1920
January	244	103
February	209	49
March	226	94
April	228	99
May	272	110
June	209	113
July	182	125
August	124	166
September	116	155

KINGS COUNTY HOSPITAL

Month	1919	1920
January	114	27
February	88	11
March	76	25
April	82	47
May	77	53
June	63	53
July	50	59
August 1 to Aug. 19	33	32
August 19 to Sep. 21	40	93

Here is a summary of a report by a special investigator for *Leslie's Weekly*, after a careful survey of conditions throughout the country:

"It is estimated that two in every five homes of the land have their own private stills or beer-brewing apparatus.

"In New York anyone with a friend and the price can obtain booze by the glass or in quantity.

The same is true of Chicago, St. Louis, Cincinnati, San Francisco—all of the larger cities.

“Despite the Eighteenth Amendment there is more drunkenness in the United States to-day than ever before. Drinking is done in secret and surreptitiously, and yet the police blotters in nearly every city reveal an increase in the number of arrests for drunkenness.

“In Philadelphia the police records show 300 per cent. more arrests for intoxication from July 1 to November 1 than for the same period last year and prior to the prohibition enactment.

“Twenty million quarts of whisky entered the United States from Canada through Detroit alone, from January 1 to September 1 of this year.”

It is not to be wondered at that there are grave doubts as to the wisdom of the law. The stronger this feeling grows, the more difficult the enforcement problem becomes.

What have the men whose duty it is to enforce prohibition to say on the subject? Mr. James F. Shevlin, supervising prohibition agent for the New York district, in a published statement was quoted as saying: “I say that prohibition is being enforced. If a man, in order to get a drink, is compelled to go after it by stealth and to pay enormous prices for the ‘drinks, isn’t that prohibition?” That, Mr.

Shevlin, is the prohibition of the bootlegger and his confederate, the corrupt politician, but it is not constitutional prohibition. Mr. Shevlin was transferred shortly after this statement was made. Mr. Frank L. Boyd, who succeeded him and who has since resigned, described enforcement of the Volstead Act as "a thankless and a hopeless task." He has given some idea of the difficulties of enforcement in a statement which has appeared in the press:

"We have two hundred enforcement officers in this state. The federal government's appropriation for enforcement of the Volstead Act is \$5,000,000. We have twenty men to cover the St. Lawrence River front and another twenty to guard all of Lake Erie. It would take the entire First Division to begin to patrol this state's water front and end smuggling. We have one hundred and ten enforcement agents in New York City. There are something like 12,000 policemen in New York City, and yet they are not able to stop burglaries and robberies with the undivided support of the city. Yet a hundred and ten men are trying to enforce the liquor law, which it appears most of the town does not care much for."

Our own experience is similar to that of all countries in which prohibition has been attempted. In China, it produced a nation of opium users. In

Sweden, nation-wide prohibition was abandoned, because it was found that it resulted in home-distillation to such an extent that individual inebriety gave place to family drunkenness. Twenty-three years after Kansas went dry, Carrie Nation began her crusade against the saloons of that state. During the next four years she made a world-wide reputation as a reformer by wielding her hatchet in wrecking the barrooms of Kansas.

Prohibition, under the Volstead Act, has followed a course which must have been foreseen by anyone familiar with the body's need for alcohol. We cannot doubt that present conditions were foreseen by the astute politicians of the medical ring. The more the scandal grows and the worse conditions become, the more disposed the people will be to insist on a modification of the law which will offer them some relief. As for the prohibitionist, if he cannot have a bone-dry country, he must accept modified prohibition as the next best thing. Such a plan has already been suggested. It has been proposed that the government purchase all the remaining whisky stocks in the country at a cost variously estimated at from \$100,000,000 to \$500,000,000 of the people's money, and turn them over to the physicians to dispense. This might not end bootlegging or home-distillation. With the people in their present mood, and with the experience they have acquired, these

could only be stopped, at a cost which no nation could afford to pay in defiance of the wishes and resolute opposition of so many of its citizens. But the transaction would lower the price of whisky and increase the popularity, power and emoluments of the physician.

Here is the plan as outlined in the press :

a. That the Internal Revenue Department be given authority to establish, in all thickly populated districts, as many government stations as may be deemed necessary for the sale of spirits.

b. That the spirits sold by such stations be purchased by the government, tested by the government, and be of a uniform quality.

c. That such spirits be sold at a uniform price, sufficient to cover their cost and the cost of maintaining the stations, without profit to the government.

d. That the Internal Revenue Department employ at such stations, at such salary as may be required to obtain them, one or more reputable physicians who shall have the authority and be under the duty to issue without charge prescriptions to anyone who may call at the stations and whom the physicians find to be in need of spirits or intoxicants for medicinal purposes.

e. That such stations shall also fill all prescriptions issued by physicians duly licensed.

f. That any physician issuing a prescription for spirits shall immediately file a copy of it with the government station, so that the latter may at all times have a complete record of prescriptions and sales.

g. That the physicians in attendance at the government stations shall have authority, after consultation and examination of the patient, to prescribe a quantity of spirits in excess of that now provided by law, if in their opinion such action is necessary.

h. That in widely scattered rural districts where it would not be practicable for patients to travel long distances to a central station, practitioners be authorized to purchase from the government at the nearest distributing station such spirits as they shall deem necessary for the needs of their patients, and shall be authorized to sell such spirits at the government fixed price, and shall be strictly accountable to the government station for all spirits received by them.

This plan is hardly in accordance with the statement of the medical association that the use of alcohol in therapeutics has no scientific value. But, once the Volstead Act has been amended and the

people have become accustomed to obtaining their whisky through the medical practitioner, there is no reason why the association should not bring their position on alcohol up to date. A little thing like consistency need not trouble them.

Whether any such plan will be put into effect is more than doubtful. But there is no doubt whatever about the effect upon the public of certain features of the enforcement measures. Police officers have been ordered by their superiors to defy the law in order to enforce it—a curious paradox in the world's greatest democracy. The constitutional rights of citizens have been wilfully and flagrantly violated. Their homes have been invaded without warrants; their baggage has been seized and examined; they have been compelled to submit to offensive and degrading personal search. And all this without a shadow of legal justification. But public opinion is beginning to make itself felt, and both federal and local authorities are responding. District attorneys, mayors and magistrates have in many instances done their clear duty and insisted that the law shall be decently observed by its paid defenders. Yet the real evil lies not in details, but at the very root of the whole matter. It is inherent in the Eighteenth Amendment itself,—a deliberate attempt under a constitutional mask to deprive the people of a natural and therefore undoubtedly constitutional right.

After such a fundamental act of violence, political and legal rights must inevitably fall by the way. As United States Senator Borah said in August, 1921: "It has become almost impossible in certain cases to enforce the law without disregarding the Constitution." The "certain cases" may be extended to all cases, for the spirit of the Constitution, if not the letter, has been violated by the amendment so unscrupulously foisted upon it. Senator Brandegee said on the same occasion: "If this law cannot be enforced except by Russian and inquisitorial practices, it is not a law for the Anglo-Saxon peoples."

The American people will cordially endorse this statement of a self-evident truth.

In the proceedings in the Senate with regard to the Willis-Campbell Bill (the Anti-Beer-Prescription Bill), during which the statements just quoted were made, an amendment was introduced (the Stanley Amendment) making it a felony for any government officer or agent, state or federal, or any other person, to search the persons or houses of the people without a warrant. Heavy penalties were provided for a violation of the clause. The Senate accepted the amendment. That may be regarded either as a simple or an extraordinary thing. In reality it is both. It is certainly a thing of the utmost and most obvious simplicity for a branch of the federal legislature to safeguard the guaranteed constitutional

rights of citizens. But it is an extraordinary thing that the wanton and contemptuous violation of the Fourth Amendment to the Constitution by the zealous partisans of the Eighteenth Amendment should require a new clause in a new statute if it is to be coped with effectually. Affairs have come to a strange pass indeed when the machinery of government has to be restrained in this way from selecting which part of the Constitution it will enforce at any cost and by any means, and which part it will ignore.

Press comment throughout the country showed a full appreciation of the gravity and yet grotesqueness of the issue. The New York *World* for August 11, 1921, said in its leader:

“What the Senate did was merely to revive in this connection the Fourth Federal Amendment, binding upon Congress and all officials of the national government, which reads:

“The right of the people to be secure in their persons, houses, papers and effects, against unreasonable searches and seizures, shall not be violated, and no warrants shall issue but upon probable cause, supported by oath or affirmation, and particularly describing the place to be searched, and the persons and things to be seized.

“This article of the American Bill of Rights has been a part of the Constitution since 1791. It

was English law going back to a time before the American Revolution. It was not superseded or nullified by the Eighteenth Amendment, which seems to be the only part of the Constitution commanding Mr. Volstead's recognition and respect."

Mr. Volstead, characteristically, had expressed himself as being grieved at the new clause, which, if kept in the bill, would be "a big blow to prohibition enforcement." He was not grieved at all by any blows, however shattering, at the enforcement of the Constitution, which naturally seems to him a little thing in comparison with his own peculiar affairs. Perhaps, remembering that George Washington was called the Father of his Country, Mr. Volstead may desire to win the title of stepfather of a changeling.

The New York *Tribune* said editorially on the same subject :

"We are too close, perhaps, to what has been going on among us for the last eight years or so for the masses of the people to assess the enormity of the violations by public servants of the guaranty contained in the Fourth Amendment.

"When historians of this age of 'The New Freedom' come to cast up the record they will have occasion to marvel that a people for whom freedom was purchased at such a cost should have drifted so far from their moorings as to be com-

pelled in the month of August, 1921, to reassert by statute the right of personal liberty as guaranteed in their Constitution."

All this is merely one of the first fruits of prohibition, which is a deliberate attack not only upon our liberties, but, as I have endeavored to show in these pages, on the very foundations of our lives.

CHAPTER XXII

GOVERNMENT BY PROPAGANDA?

There was a time, within the memory of many of us, when the American citizen was free to live his own life and seek his livelihood, unfettered by continual government supervision. The administration of public affairs, so far as it affected the individual directly, was limited to certain necessary undertakings clearly defined by the Constitution, such as raising the national revenues, coining money, administering justice, maintaining a postal system and extending encouragement to the useful arts and sciences.

The extension of government regulation had its beginning in the supervision of the business of our corporations. With the multiplication of government bureaus which an unwieldy system of taxation and other vicious measures have encouraged, a great network of surveillance has gradually been woven round our people, until it has now touched even the home life of the nation. The government bureau, instead of functioning for the common good, has fallen into the hands of special interests, which have used it to further their own ends. So far, these interests have been able to hold themselves beyond

the reach of the law. But prohibition has only been made possible through a gradual breaking down of our system of government. The adoption of the Eighteenth Amendment has now brought to the people a clear realization that their liberties are threatened. Whatever the outcome of the liquor controversy, they will not lose sight of the fact that the evils which have prepared the way for prohibition must be rooted out.

Our system of government is supposed to be founded upon popular representation by geographical division. When the Constitution was adopted it was contemplated that the people of the several states should be free to choose their own representatives. Upon questions of great national importance states might become grouped on one side or the other through the mutual sympathies of their peoples, and thus the feelings and opinions of the inhabitants of one state might influence the inhabitants of another. But that is not the case to-day. There are great organizations, sometimes nation-wide in their activities and at other times operating in more or less important sections of the country, throwing their influence to suit their interest, first in one state, then in another, and defying the sovereignty of the people of those states. It may be a union of the employees of a transcontinental railroad, whose influence may be felt in any one of a chain of states extending from

the Atlantic to the Pacific; or a miners' union, organized throughout the coalfields of Ohio, Pennsylvania and West Virginia; or the Anti-Saloon League, an organization drawing its members from all parts of the country and leagued with many subsidiary organizations. These unions or societies are organizations of private citizens, with no lawful political standing but with great political influence. The smaller the state in which they are operating the more this influence is felt. The states of the Union vary in population from Nevada, with about 120,000 people, to New York, with over 10,000,000. Yet all states are on an equal footing when acting upon an amendment to the Constitution. That is a fact with which everybody is quite familiar, but everybody may not appreciate its significance.

In putting through the Eighteenth Amendment, the Anti-Saloon League had the support and co-operation of the National Health bureaus, and these in turn were controlled by the medical union, an international organization. Thus, through secret combinations, even foreign influences were brought to bear in the making of our laws. This was accomplished by the dissemination of propaganda, in the preparation of which the government bureaus participated. The Congress was intended to be a deliberating body. Are we to substitute government by propaganda for our original system?

The success of the prohibition movement has emboldened the propagandists. Other attacks upon our liberties have begun. It is not a case simply of an anti-tobacco crusade or some similar movement. There will be plenty of those. But our religious liberties themselves are to be assailed. The same methods are to be employed, according to a statement by one of the agitators:

“We shall work in every congressional district in every state. We shall agitate and spread propaganda, and cause voters to write unceasingly to their Representative in Congress, until no Congressman who cares to stay in Congress will refuse to vote for our measures. These were the methods used by the Anti-Saloon League, and they were effective.”

It is high time these irresponsible organizations were brought within the control of the law. The proverb of the wolf in sheep's clothing is as full of meaning for us to-day as it was in the time of Æsop. We must recognize the fact that an undertaking which is begun in all sincerity may fall into the hands of the unscrupulous, and that high pretensions may be only a camouflage for sordid motives. If a movement is for the good of the people it will do no harm to know all about it in the beginning. If these organizations were required to incorporate and to

keep an accurate list of their members and contributors, and the amounts contributed, the press of the country could be relied upon to do the rest. If it failed and harm should come, we should at least know whom to hold accountable. We should not be obliged to add to the burdens of the taxpayers in seeking out the names of the supporters of an illegal undertaking, as in the case of the parlor bolshevists. Prohibition has already done more harm in this country than bolshevism ever could do. There may come a time when we shall be seeking the names of our parlor prohibitionists.

CHAPTER XXIII

THE WAY OUT

Prohibition has been adopted as a part of the fundamental law of the land. Every safeguard which the ingenuity of legal minds could devise has been placed around it. When we consider that it will be necessary to obtain the consent of the legislatures (or conventions) of three-fourths of the several states to undo what has been done, and that these bodies will be watched and influenced by the Anti-Saloon League, backed by a vast army of old and new profiteers and their political allies, the repeal of the Eighteenth Amendment seems all but impossible. Yet in spite of the strength of its legal position, there is a weakness in the very foundation of prohibition which it has been impossible to rectify. Once this is understood, it will require only a well-placed blow to bring the fabric so carefully erected crumbling down about the heads of its promoters. As is often the case, when the little minds of men are pitted against the purposes of nature, a temporary success has been seized only to make the final discomfiture more complete.

The whole structure of prohibition rests upon the premise that alcohol is harmful—a habit-forming drug, a poison—and this conception is maintained by the government medical bureaus. When we remove the misguided, inefficient men from our national health departments and establish an honest and competent service, that service will tell us that alcohol is necessary, both as food and medicine, to sustain human life. The Eighteenth Amendment will then automatically become unconstitutional. No nation, especially one as large as the United States, can lay down hard and fast rules for the nourishment of its people, and survive. To extend governmental regulation to the foods we eat (except in emergencies or to ensure pure products) would be contrary to all American principles and traditions. And not only would prohibition come to its unregretted end with the establishment of a sound national health service, but the way would be cleared for the eradication of disease, here and throughout the world—tuberculosis, influenza, pneumonia and other infections. That these diseases still prevail is due to the power of an organization which so far has been able to block all improvements in medical treatment, except those which it could control and so turn to professional profit. Yet this organization has not been content with the disastrous influence it already exercises. As Dr. John P. Davin, of New York, says

in a letter to the *New York World* of August 11, 1921: "For a long time the medical politicians who control the American Medical Association have aimed at a Cabinet position for one of their number in a Federal Department of Health." But it is natural that these "medical politicians" should aim at a Cabinet position to give them more leverage for their destructive efforts. Not long ago they were trying to place one of their organization in the White House itself. Fortunately, the White House can still stand for progressiveness, not reaction.

Compare the position of medicine to-day with that of other sciences. Note some of the great achievements of mankind in other fields of human endeavor. Consider only the most recent successes. Man is able to talk over a wire from New York to San Francisco and recognize his friend's voice. He has crossed the broad Atlantic through the air in little more than a single night. He has harnessed the air waves to carry the messages of his telegraph and telephone. He has preserved sound indestructibly on little discs, so that the great masters of music shall be indeed immortal and future ages shall still hear our Carusos and Paderewskis. Curative medicine, on the other hand, in spite of all we have learned about disease, stands almost exactly where it did at the beginning of the Christian era. Have you been led to believe otherwise, as the result of successful

medical propaganda? Then hear the truth from the medical text-books:

"We have learned to *prevent* many diseases by the elimination of the corresponding infecting agents from our midst; cholera, plague, typhus fever, typhoid fever, yellow fever, smallpox, malaria and diphtheria are diseases which, if they still exist among civilized people, do so with the consent of the people in the face of a full knowledge of the manner of their prevention.

"Wonderful progress has also been made in surgery. By its means countless lives have been saved which otherwise would have been doomed. But, after all, surgical treatment cannot be regarded as curative treatment in the proper sense of the word; the surgeon may amputate a badly crushed limb or he may remove a diseased appendix, or a cancerous breast, but he does not cure the limb, nor the appendix, nor does he restore the breast to its original condition. The final repair, the healing of the wound, is accomplished by the animal body itself. The surgeon, however, is frequently placed in a position where he can assist nature materially to accomplish a cure, and in this respect he is certainly more favorably placed than the internist.

"The latter may be a most skilful diagnostician,

an excellent pathologist perhaps, but he does not cure the diseases with which he is brought into contact. He may in a measure influence some diseases by his directions for the general care of the patient, but as a rule the patient dies or recovers irrespective of his therapeutic efforts, in so far at least as these efforts are based upon ancient empiricism. Typhoid fever patients still pursue the same course which was so well described by the physicians of the mediæval ages; our pneumonia death rate is still what it was when the earliest records on the subject were kept, and is virtually the same for the millionaire in his marble palace, surrounded by doctors and nurses, as for the tramp who is cared for by the roadside by his brother tramps. The 'virulence' of an epidemic of scarlatina or measles may vary, but our death rate in the long run is virtually the same. Where actual progress has been made in the treatment of disease, such progress has been due not to our therapeutic interference by means of drugs, but to a recognition, be it ever so slight, of those factors by which nature herself, unaided and at the same time unhampered by empirical drug treatment, seeks to accomplish that end. For after all, the very thing which physicians have sought to accomplish in all the centuries that have passed, viz., the cure of disease, that very thing nature has

accomplished by herself, before our very eyes, countless millions of times.

“Nature herself cures 75 per cent. of the pneumonia cases, while the physician fails to cure any, for surely he cannot claim as his own what nature does, and he evidently loses the 25 per cent. that nature also loses.”*

Organized Medicine obtained its power as the result of the high pretensions of medical ethics—“the services it can render to humanity.” Through this plea it has been able to consolidate the most powerful organization of modern times; an organization which would not be permitted to exist except for its avowed purpose, the advancement of science and the welfare of the human race. A British court† has recently swept away the gloss and pretence surrounding medical ethics, and they stand revealed as the private rules of an international association of individuals who are letting themselves for hire—rules which have no foundation, in this country at least, in national laws and which are contrary to the spirit of the Constitution of the United States.

The American branch of this association is organ-

* “Infection and Immunity: A Text-Book of Immunology and Serology”; Simon, pp. 18, 19.

† High Court of Justice, King’s Bench Division. Pratt and Others vs. The British Medical Association and Others. (1919.) 1 K. B. 244.

ized along the same lines as the Workmen's and Soldiers' Councils of Russia. Their governing body consists of delegates from constituent associations, scientific sections, and medical departments of the United States Government. While it is not permitted to the employees of the postal service to organize and send their delegates to the meetings of the American Federation of Labor, the Public Health Service and other medical departments of the government are privileged to send their representatives to the House of Delegates of the medical union because it poses as a scientific body.

The association has also established connections with many of our great universities through their medical colleges. The medical college is, in a measure, independent of the control of the university trustees and subject to the rules of the medical association. It is, nevertheless, an integral part of the university and as such is entitled to all the prestige which the name can command.

The endorsement and assistance which the association has thus, indirectly, been able to obtain from the government and the universities has been a great help to the organization in spreading its propaganda among the people, and in its conflict with the newer schools of medicine. But the most important and sinister exercise of its power has been in the use which the association has made of the university and

other institutions to control the course of medical progress.

Medicine is not a simple science where progress can be made along a given line. It embraces many subservient sciences — anatomy, physiology, pathology, bacteriology, chemistry, serology, etc.—one often specially dependent upon another. The very complexity of the science has laid it open to bureaucratic exploitation. If something new in any of the subservient sciences was discovered which appeared to be against the interests of the association or which they were unable to control, it was a simple matter to refer it to one of the government bureaus, which promptly passed it on to a college or some other institution, where it was pigeonholed. If the matter was ever called to public attention, the mere fact that the government and a great university had had the opportunity to pass upon it and had dropped it was sufficient to condemn it in the public eye. Perhaps the reader will have a better understanding of the workings of the system if it is shown in operation.

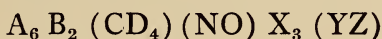
When the great influenza pandemic was taking its heavy toll from our population, there was a general discussion of the bacteriology of the disease. Inspired articles on the value of an influenza serum appeared in the newspapers, and bills were introduced into Congress to appropriate a large sum for the purpose of isolating the germ which was causing

the havoc. Long before the infection reached America an accurate knowledge of the disease had been obtained through private experiments and an effective treatment perfected. These experiments had shown that serum was of little or no value in the treatment of this type of infection. Full information was laid before the government bureaus. In spite of this, the authorities went ahead with their plans for the production of a serum. Although it was entirely experimental, the serum was *sold* in large quantities throughout the country. After a year's trial it was pronounced worthless. If the serum had been a patent medicine, put out by a pharmaceutical house, its promoters would have been called to account. But it was a "scientific" effort and the unfortunates who died as a result of using a worthless remedial agent became victims to the advancement of "science." As for the other treatment, it was passed from one government bureau to another. It finally brought up in the Influenza Committee of the Public Health Service and was by them referred to the Harvard Medical School. That was the last heard of it.

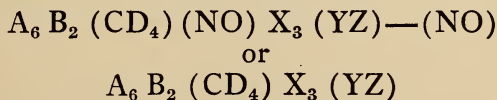
An American chemist discovered a process for the improvement of a well-known drug. This chemical was recognized by physicians throughout the world as a valuable treatment for pneumonia. Many of the drugs of the pharmacopœia have been improved

and refined from time to time. In this particular case, the form of the drug most used in America was manufactured under a process which had been discovered in a German laboratory. The American chemist's process was so far an improvement on the German that injurious constituents, amounting to 20 per cent., which were present in the German product, were removed without detracting from the therapeutic value of the finished product. The drug in its refined form was much more effective in its combinations with other chemicals with which it was usually prescribed.

The chemist took his product to the American Medical Association. He gave his formula. The parent drug was listed in the United States Pharmacopœia and also known by its chemical symbols. To illustrate we will call it—



The process removed certain poisons represented by, let us say, NO. The chemist's formula therefore was—



This did not satisfy the medical association. They demanded to know how the poisons, NO, were extracted. The chemist was in a quandary. If he

made his process public, he would first have to patent it or surrender his only asset, which had cost him a small fortune and years of labor. His product would then become a patent medicine and subject to the virulent attack of all the medical journals controlled by the association. If he refused, although every chemical molecule in the refined drug was known, it became a secret medicine condemned by the ethics of the profession. After a protracted correspondence the process was refused. The association then published in its *Journal* a report condemning the product, and this was mailed to every one of its members.

The Constitution of the United States provides (Article I, Section 8)—

“The Congress shall have power—

“To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.”

So far as this concerns medicine, it has been made a mockery of by the medical union, as have also the pure food laws.

But the chemist was not to be baffled. He had influential friends and he proceeded to introduce his product. The value of his discovery was confirmed by the splendid results obtained by independent physi-

cians in their daily practice. When the United States entered the war, the new drug was offered to the government, not as so many profiteers were offering their wares, but at cost. But the government bureaucrats had been warned, and they refused the offer. The chemist persisted. It was politely suggested that he take the matter up with the Rockefeller Institute. This he did, but it availed nothing. His experience at the institute would fill a chapter in itself. As a last resort, he determined to try what political influence would do. Two men, high in government circles, were approached, and they consented to help. Then, and only then, did the government bureaus become interested. They saw that they had a determined man to deal with, and they finally agreed to take the matter under advisement. The chemist was directed to send his product to the College of Physicians and Surgeons, Columbia University, to be tested. There a worthless test and a worthless report were made, and that ended the matter. It was a coincidence that the chemist had graduated years before from the same university's College of Pharmacy.

Is it plain now how this system works? Any matter which might cause the association concern or make trouble for its agents in the government bureaus can always be disposed of by referring it to a reputable institution. And if someone in that insti-

tution is "careless" or "inattentive to his duties" and makes a blunder, it in no way reflects on the officer of the government or his association.

Do you think the mother in far off Kansas, when she received the War Department's telegram that her boy was down with pneumonia in a Texas camp, cared whether the medicine they were giving him was manufactured under a German patent or an American patent, whether it was ethical or unethical, as long as it was the best that science could produce? It was her boy's life she wanted; nothing else mattered to her. And the colonels of the medical corps, who have held their positions because they were willing to do their union's bidding, did they tell that mother that everything possible was being done for her boy, or did they tell her the truth, that no matter how her son fared, union rules must be observed? The Patent Office was established as much for the benefit of our people as for the protection of our authors and inventors. America is entitled to the best efforts of all her citizens, no matter who they are or what their calling.

We have often cause to wonder at the wisdom of the farseeing statesmen who laid the foundations of our government. It is our good fortune that we have, in addition to our great state papers, a voluminous record of the thoughts of these illustrious men. It seems as if almost every contingency which

we have had to meet in recent years has been covered in their writings. It was the concentration of power in the federal bureaus which made prohibition possible. Thomas Jefferson, in his first annual message to Congress, warned the people against these federal offices.

“When we consider that this government is charged with the external and mutual relations only of these states; that the states themselves have principal care of our persons, our property, and our reputation, constituting the great field of human concerns; we may well doubt whether our organization is not too complicated, too expensive; whether offices and officers have not been multiplied unnecessarily and sometimes injuriously to the service they were meant to promote.”*

At any rate, if we must have officials and bureaus, let us take good care that they are as efficient as possible. As soon as we have a national health service that is concerned wholly with the interests of the public, and not with those of any domineering professional association, the first great step in the cause of constitutional liberty will have been taken. For prohibition will end.

* Thomas Jefferson. First Annual Message, December 8, 1801.

CHAPTER XXIV

CONCLUSION

There is much to be learned, and not about alcohol alone, from the prohibition controversy. Nothing in recent years has brought us more squarely face to face with our shortcomings. We have held our form of government high among the democratic nations of the earth; yet representative government is a failure when controlled by fanatical ignorance. There is no despotism worse than that of an ignorant democracy.

The prohibition movement found us destitute of any real knowledge of alcohol. It found us ignorant or careless, in far too many instances, on the subject of natural laws, economics, and other fundamentals. It has shown us so ignorant of history, even that of our own country, that we have been unable to profit by the past experience of former generations of Americans. It is only human to err, but the successful man is the one who profits by experience and does not fall into the same mistake a second time. This is as true of a nation as of an individual.

The history of prohibition goes back three thousand years. In our own country it goes back almost three hundred. Early American records show that in 1663 the Governor of Delaware prohibited distilling and brewing in that colony. From then until now prohibition has been agitated periodically in the United States. As with the perpetual motion machine and other interesting or irritating obsessions, there has always been someone ready to exploit the prohibition fallacy as soon as the public recovered from their last experience. Sometimes it has been the professional reformer, looking for a little easy money; at others the visionary fanatic, too much impressed by the importance of his own idea, and too little interested in America to study her history. The usual crowd-elements have joined the movement, attracted by its presumed idealism, or the opportunities for profit, or the mere desire to be associated with agitation and action.

Many of our most distinguished statesmen have gone on record against this class of legislation. Abraham Lincoln's statement, made in the controversy of 1840, is one of the notable examples. He said:

"Prohibition will work great injury to the cause of temperance. It is a species of intemperance within itself, for it goes beyond the bounds of

reason, in that it attempts to control a man's appetite by legislation and makes a crime out of things that are not crimes. A prohibition law strikes a blow at the very principles on which our government was founded."*

There is a whole volume of scientific facts condensed into these few words.

Between 1851 and 1855 a substantial part of the United States adopted prohibition—the New England States, New York and Delaware or the Middle States, and Ohio, Indiana, Illinois, Iowa and Michigan of the Middle West, with the territory of Nebraska. These states contained about forty-eight per cent. of the population of the entire country. We need no stronger proof of the failure of prohibition as a temperance measure than the history of that period.

Before this time, from 1817 to 1850, there had been no tax on alcoholic liquors. Good whisky sold at wholesale at twenty-five cents a gallon. It was on sale in the groceries and other stores throughout the country. The whisky barrel on tap with the tin cup hanging beside it was a familiar sight in the country store. Under such conditions temperance is a virtue. And the American people made it so, for during the

* *Congressional Record*, Sixty-third Congress, Third Session, p. 629.

system of free whisky the per capita consumption was gradually decreased.

A great change came with prohibition. In 1850 our population numbered 23,191,876 and the total consumption of spirits was 51,833,473 gallons. In 1860 the population had increased 36 per cent. to 31,443,321, while the total consumption of spirits, in spite of the prohibition enactments, increased 73 per cent. to 89,968,651 gallons. During this period the consumption of wines also increased, while that of malt liquors was more than doubled.

The failure of prohibition in the 'fifties has been attributed by the prohibitionists to lack of legal means of enforcement, and they have used it as an argument for constitutional prohibition. To prove the possibility of total abstinence they point to the Mohammedans, also to the North American Indians who had never used alcohol until the white man brought his firewater to this continent. They cite these cases as examples of peoples that have existed for generations without alcohol. The fact that a people have never used alcoholic liquor or have been able to give it up is not an argument for prohibition. Let us look below the surface. Compare the industries of these people with our own great industrial development. Where were the brass factories in Connecticut before the coming of the English? How do the manufactures of Mohammedan

countries compare with those of Europe and America? How does the business life of some of the Asiatic nations contrast with ours? The telegraph, the telephone, the typewriter, the adding machine and all the other labor-saving devices have been invented to simplify our business methods, but they have not lessened the burdens of our industrial workers. We have simply taken advantage of every time-saving invention to multiply our activities. Our corporations are larger, our enterprises greater and our fortunes more colossal. It is the life we are leading that has made prohibition impossible in America. If the nation really wants prohibition there is no reason why it should not have it, if it is ready to pay the price and suffer the penalties *—and providing we are willing to adopt the standard

* Many of the plagues that have swept over the earth had their origin and acquired their virulence among the prohibition peoples of Asia, who have suffered far more from disease than the Western nations. Of course, other conditions must be considered, besides prohibition; but the facts are instructive. In spite of their leisurely, easy-going existence, the average span of life among the inhabitants of India and China is only about half our own. Compared with the Western nation's average of from thirty-six to fifty-six years, we find an average lifetime in India of from nineteen to twenty-one years, and from twenty-two to twenty-five years in China. To illustrate their weakness when attacked by disease: in some prohibition countries the mortality from influenza during the great pandemic was over five times the American death rate.

of living of a prohibition people. But let us look squarely at our problem, with a full realization of what real prohibition will mean; for it is impossible to change a nation's whole mode of existence by the passage of one prohibitory law.

There is no virtue in any controversy unless we seek the truth. And to this end, if we wish to have a better understanding of the whole subject of prohibition, we must first have a better understanding of alcohol itself—its uses and abuses. We must discard any false impressions acquired from passing observation of the drunkard of the saloon and set ourselves to learning the body's natural needs, not in the seclusion of the laboratory but in the everyday life of the American people.

INDEX

- ADAMSON LAW, 165
- Alcohol and auto-intoxication, 78 *sqq.*
- and efficiency, 67, 68
 - and fatigue, 113 *sqq.*, 127
 - and golf, 119 *sqq.*
 - and grain conservation, 136 *sqq.*
 - and immigration, 52
 - and insanity, 63, 64, 65
 - and longevity, 50, 51, 69 *sqq.*
 - and religion, 13 *sqq.*
 - and suicide, 65, 66
 - as a medicine, 104 *sqq.*
 - as a restorative, compared with nature, 72, 73
 - as a stimulant, 105, 113, 117, 118
 - food value of, 15, 46, 47, 97 *sqq.*, 133
 - traffic, mortality statistics, 75, 76
- Alcoholic beverages, importation statistics, 143, 144, 145
- Alcoholism in New York and Brooklyn, 175, 176
- "Alcohol—Its Relation to Human Efficiency and Longevity," vii, 57, 58, 59, 60, 62, 75, 137, 169
- American Federation of Labor, 53, 134, 198
- American Medical Association, viii, 17, 18, 20, 22 *sqq.*, 37, 38, 43, 44, 46, 47, 48, 49, 54, 55, 59, 112, 124, 194, 201, 202
- A. M. A., Committee on Legislation, 47
- A. M. A., House of Delegates, 39, 198
- Journal*, 202
 - Resolution condemning alcohol, 39, 46, 47, 58
- Anderson, W. H., 57
- Antibodies, 35, 42, 43, 60, 109, 110, 111
- Anti-Saloon League, 56, 57, 154, 173, 189, 192
- Appleton's *Medical Dictionary*, 32
- Arnold, Dr. Alma C., 31, 95
- Aronovitch, Dr., 114
- Arrests for alcoholism in New York, 175
- Aschaffenberg, Dr., 67
- Auto-intoxication, 78 *sqq.*
- BEHRING, Dr., 23, 25
- Bell, Sir Robert, 33
- Bellevue Hospital, 176
- Bennett, Arnold, 123
- Borah, Senator, 183
- Bordet, Dr., 23
- Boston *Medical and Surgical Journal*, 83
- Boyd, Frank L., 177
- Brandegge, Senator, 183
- Bremer County case, 163
- Brewers' Board of Trade, 136
- British Medical Association, 197
- British Munition Workers' Health Committee, 127
- Bryan, Wm. J., 57
- Bureau of Animal Industry, 32
- CAMP WHITMAN, 32
- Canal, 14
- Canadian Government, 34

- Carrel, Dr. A., 88
 Champagne, effect of, 60, 61
 Chemotherapy, 36 *sqg.*
 Cicero, 73
 Cider making, 90, 91
 Cincinnati City Hospital, 33
 Cincinnati *Enquirer*, 33
 Cleveland, house shortage in,
 133, 134
 Cobb, Irvin S., 170
 Columbia University, 146
 — College of Physicians
 and Surgeons, 203
 — Department of Physiol-
 ogy, 114
 Concentration camps, 111, 128,
 129
Congressional Record, 208
 Council of National Defence,
 Medical Section, 111
 Currency inflation, 141

 "DARWINISM AND RACE PROG-
 RESS," 64
 Davin, Dr. John P., 65, 193
 Declaration of Independence, 46
 "De Senectute," 73
 Devonport, Lord, 127
 Diphtheria antitoxin, 25
 Douglas, Dr., 23

 EAST and West, contrasted, 209,
 210
 Ehrlich, Prof. Paul, 23, 35 *sqg.*
 Ehrlich's side-chain theory, 35
 sqg., 108
 Ethics, medical code of, 23,
 24
 Exchange depreciation, 141, 142

 FARMERS' BULLETIN, 32
 Fatigue and alcohol, 113 *sqg.*
 — and disease, 123 *sqg.*
 — toxins, 114
 Federal prohibition director,
 Illinois, 48
 Fees, medical, 40
 Fillinger, Dr., 60
 Fisher, Prof. Irving, 57

 Fisk, Dr. Eugene L., vii, viii, 13,
 58, 59, 60, 62, 65, 67, 73,
 75, 76, 78, 80, 136, 138, 169
 Foot and mouth disease, 32, 34
 Fourteenth Regiment, N. Y. N.
 G., 32
 Fourth Amendment, 184, 185

 GALLIPOLI, 33
 Georgia and the Anti-Saloon
 League, 56, 57
 Germicide, practical, 36 *sqg.*,
 108, 109
 Golf and alcohol, 119 *sqg.*
 Gompers, Samuel, 134
 Grain conservation and alcohol,
 136 *sqg.*
 "Greenback" party, 140

 HALL, Prof., W. S., 85
 Hare, Dr., 106
 Harvard Medical School, 200
 Hippocrates, 26
 Hobson, R. P., 57, 147
 House of Commons, 33
 House of Representatives, Ap-
 propriations Committee, 17
 "Human Machine and Industrial
 Efficiency, The," 124
 Hunter, Arthur, 50

 ILLINOIS, federal prohibition di-
 rector in, 48
 "Immortality of the Cells and
 Tissues," 89
 Imports of alcoholic beverages,
 143, 144, 145
 Indiana State Penitentiary, 172
 Infantile paralysis, 32
 Infection, explanation of, 42, 43
 "Infection and Immunity," 197
 Influenza Committee, Public
 Health Service, 200
 Influenza epidemic, 111, 112,
 126, 157, 158
 Insanity and alcohol, 63, 64, 65
 Internal Revenue Department,
 180
 Iowa Supreme Court, 163
 Israelites, 14, 15

JACOBI, Dr. Abram, 80
 Jefferson, Thomas, 205
 Johnson, "Pussyfoot," 57
Journal of A. M. A., 202
Journal of Experimental Medicine, 88

KINGS COUNTY HOSPITAL, 176

LABOR unionism, 159 *sqq.*
 Law of Moses, 13, 14, 15
 Lee, Dr., 114, 124
Leslie's Weekly, 176
 Life average in China, 210
 — in India, 210
 Life Extension Institute, 59
 — — Hygiene Reference Board, 59, 62
 Life insurance companies, 17, 18, 49, 50, 62, 68, 75, 169
 Lincoln, Abraham, 207
 Liquor trade mortality statistics, 75, 76
 Loyster, James A., 31

MANCHESTER weavers, 44
 Mayo, Dr. Charles H., 39
 "Medical Ethnology," 81
 Medical ethics, 23, 24
 Medical fees, 40
Medical Record, N. Y., 81, 89
 Medical Section, Council of National Defence, 111
 "Medical Student's Manual of Chemistry," 61
 Metchnikoff, Prof., 23, 78
 Moran, Wm. H., 171
 Mullan-Gage Act, 147
 Munition Workers' Health Committee, British, 127

NAIN, 14
 Nation, Carrie, 179
 National Health Service, 189, 198
 Nature's process of fertility renewal, 72, 73
 Neo-Salvarsan, 37
 N. Y. Health Department, 32, 33

N. Y. *Herald*, 31
 N. Y. Life Insurance Co., 50
N. Y. Medical Record, 81, 89
N. Y. Tribune, 185
N. Y. World, 33, 65, 184, 194
 Nutrition Laboratory, Boston, 67

OCCUPATIONAL hazards (alcohol), 75

PAGET, Sir James, 124
 Paratyphoid fever, 32
 Pasteur, Dr., 22, 23
 Patent medicines, 26, 27, 28, 37, 38
 Pfeiffer, Dr., 23
 Philippines, alcohol and U. S. troops, 81, 82
 Plumb plan, 161, 165
 Police court statistics, N. Y. City, 175
 "Practical Therapeutics," 106
 Pratt case, 197
 Prohibition and labor, 51, 52, 53, 133, 134
 — cost of, 147, 154
 — history of, in U. S. A., 173 *sqq.*, 207, 208
 — in the South, 17, 56, 57
 — loss of revenue through, 146
 Proverbs (quoted), 104
 Public Health Service, 189, 198
 — — Influenza Committee, 200

REID, G. Archdall, 64
 Religion and alcohol, 13 *sqq.*
 Rockefeller family, 18, 54
 — Institute, 54, 203
 — John D., 55
 Roosevelt, Theodore, 158

ST. ELIZABETH'S HOSPITAL, Washington, D. C., 63
 Saleeby, Dr. C. W., 139, 140
 Salvarsan, 37
 Save-a-Life League, 66
 Secret Service Bureau, 171
 Seligman, Prof. E. R. A., 146

- Senate Finance Committee, 146
 Serum therapy, 23, 30 *sqq.*
 Shevlin, Jas. F., 177
 Simon, Dr., 197
 Sing Sing prison, 172
 Society for the Study of In-
 ebriety, 63
 Sorensen, Dr., 138
 Stamp Act, 174
 Standard Oil Co., 17, 54, 55
 Stanley Amendment, 183
 Stedman's *Medical Dictionary*,
 97
 Suicide and alcohol, 65, 66
 Supreme Court, Iowa, 163
 — U. S. A., 11, 46, 47, 112,
 149

 TRAINING camps, 111, 128, 129
 "Triangle of Health, The," 31,
 95
 Typhoid fever, 32

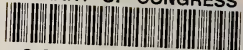
 U. S. ARMY Reports, 32

 VACCINATION, 31, 32, 33
 Volstead Act, 147, 171, 172, 178,
 179, 181
 — Committee, 57
 — Representative, 185

 WASHINGTON, George, 185
 Weichardt, Dr., 114
 Weigert's law of regeneration,
 110
 Weinberg, Dr., 60
 Wheeler, Wayne B., 57
 Whisky treatment in influenza
 cases, 111, 112
 White, Dr. Wm. A., 63
 Willis-Campbell Bill, 183
 Wilson, Woodrow, 124, 125
 Witthaus, Dr., 61
 Women's Christian Temperance
 Union, 27
 Woodruff, Dr. Chas. E., 80, 81
 Wright, Dr., 23

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